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THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

THE WEEKLY NEWSPAPER FOR PHARMACY
and all sections of the drug, pharmaceutical,
fine chemical, cosmetic, and allied industries

*Official organ of the Pharmaceutical Society of Ireland
and of the Pharmaceutical Society of Northern Ireland*

Volume 184

December 25, 1965

No. 4480

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PUBLISHED BY

MORGAN BROTHERS (PUBLISHERS), LTD.,
at 28 Essex Street, Strand, London, W.C.2

Telephone: Central 6565



MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS



MORGAN BROTHERS (PUBLISHERS), LTD., 1965

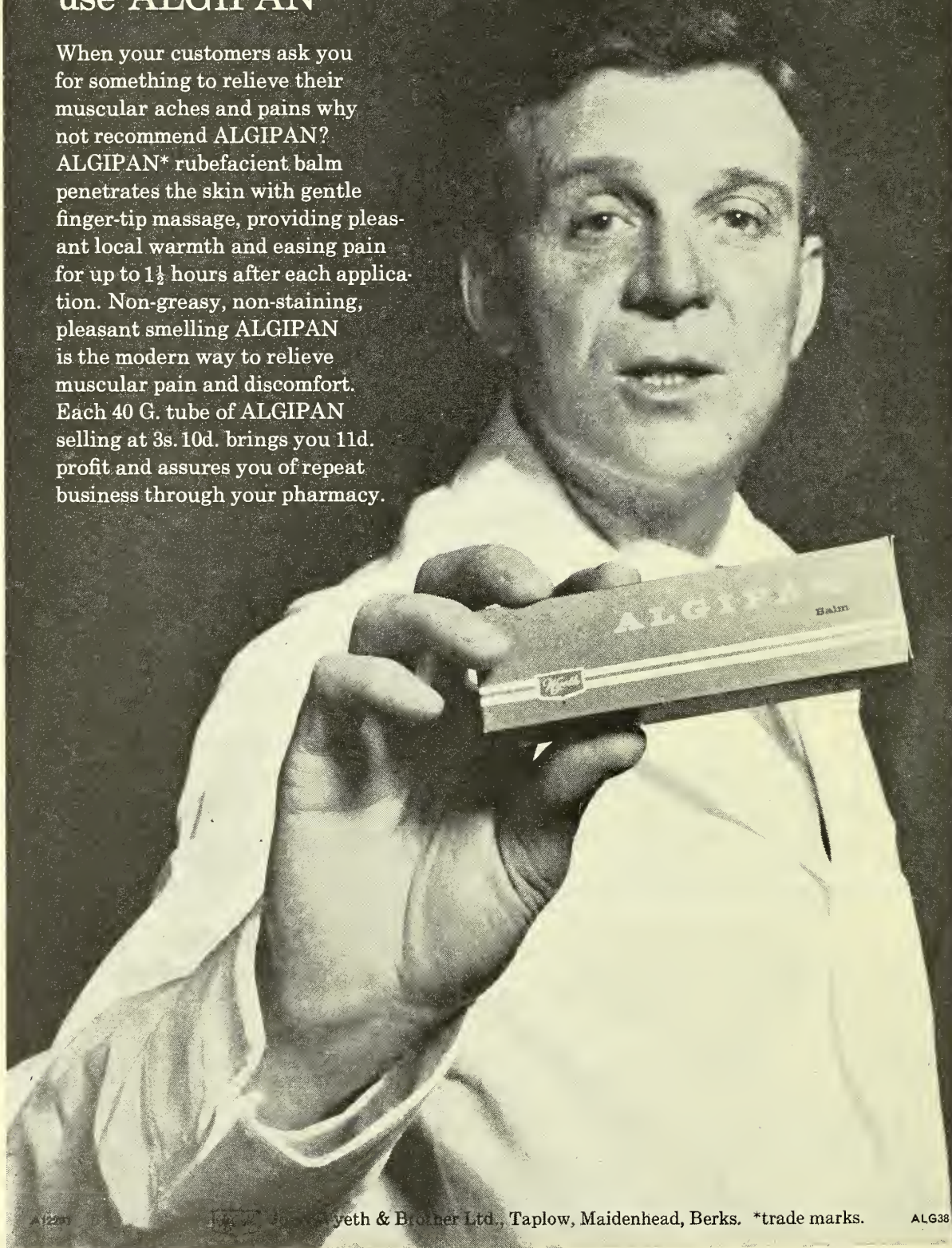
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The CHEMIST AND DRUGGIST

Volume 184

DECEMBER 25, 1965

No. 4480

wishes all its readers
A MERRY CHRISTMAS
and a prosperous New Year

N.H.S. Medicines COLLECTION IN RURAL AREAS

CLERKS of Executive Councils have received from Mr. F. W. Adams (secretary and registrar, Pharmaceutical Society of Great Britain) a letter about the collection of prescriptions and the delivery of dispensed medicines. The letter states:—

I WROTE to you on March 25, 1964, in connection with the problem of providing pharmaceutical services for outlying areas involving the collection of prescriptions and the delivery of dispensed medicines. Four conditions which such arrangements should satisfy were set out in my letter as follows:—

1. It should be initiated by the local Pharmaceutical Committee or some body representing the public affected.
2. The points at which the prescriptions are collected and to which medicines are delivered should be free from any association with the supply of medicines.
3. If there is more than one pharmacy to which the prescription might go all should have the opportunity to take part in the scheme in rotation.
4. Special attention should be paid to the packing of the dispensed medicines to ensure correct delivery and the conveyance of any instructions or warnings which would normally be given verbally in the pharmacy.

The Council, having given further thought to the position of the Society in relation to these arrangements, feel it is desirable that they should be notified whenever the question of such a scheme arises. Whilst the local Pharmaceutical Committee should be responsible for initial consideration of any proposed scheme it should not be put into operation until confirmation from the Society has been obtained. This point of view has been discussed with the Ministry of Health and there is agreement that this procedure should be followed.

West-country Floods

PHARMACIES MISS THE WORST

ONLY slight damage appears to have been caused to pharmacies by the renewed flooding during the weekend of December 18-19. Customers were unable to reach the premises of Skinner & Davidson, Ltd., in Longden Coleham, Shrewsbury, on December 18 and 20 because of water forced up through drains, but the shop itself was unaffected. In Monmouthshire the floor of Mr. W. J. Evans' pharmacy at Bridge Street, Usk, was "just wetted," but stock had already been removed upstairs following timely warnings by the police. An-

other pharmacy to escape was that of Rossiters Pharmacies, Ltd., Bridge Street, Tiverton, Devon, where the water reached the steps but did not enter the shop. Claims on Chemists' Mutual Insurance Co., Ltd., had not gone above the normal number at the time of going to press. A wholesaler who did not escape the previous week's floods was Richard Daniel & Son, Ltd., Derby, whose warehouse and offices came under 3 ft. of water when the River Derwent overflowed on December 10. Employees were rescued by boat. Some stock was damaged, but the major loss was of invoicing machinery, which is having to be replaced, resulting in some accountancy delays. Efforts of the staff enabled full service to be resumed by December 14.

N.H.S.

ADVANCE PAYMENTS ARRANGEMENTS
THE Central N.H.S. (Chemist Contractors) Committee and the Ministry of Health have agreed that the special interim payments at present held by

EXCHANGING "GEN" ON ANTIBIOTICS:

Dr. Y. Yagisawa (managing director, Japan Antibiotics Research Association) was recently in Europe and visited the premises of Glaxo Laboratories, Ltd., Greenford, Middlesex. He is here seen (right) with the company's technical publications manager (Mr. S. F. Woodward) and marketing officer for the Far East (Mr. M. K. Biggs) discussing slides of the antibiotic Ceporin. Dr. Yagisawa was secretary of the International Congress of Chemotherapy, which met recently in Washington, D.C., U.S.A. He is also secretary-general of the Japan Society of Chemotherapy, and editorial manager of the *Journal of Antibiotics*.



chemist contractors should be replaced by a payment on account. Under the new arrangements each chemist contractor will receive an advance payment amounting to 80 per cent. of the total sum estimated to be due for the prescriptions awaiting pricing. The advance payment will be made during the first few days of the month following the submission of the prescriptions for pricing, and the balance of the total sum due will be paid at the same time as the payment on account for the following month. Detailed arrangements are being worked out, and it is expected that the change will be introduced in respect of February 1966 prescriptions, so that the first payment on account will be made during the first few days of April.

Agricultural Chemicals

MORE APPROVED PRODUCTS

THE Agricultural Departments of the United Kingdom announce that the following additional products have been approved under the Agricultural Chemicals Approval Scheme:—

Fungicides

MANEB WEETABLE POWDERS: Berk Maneb 80 per cent. dispersible powder (F. W. Berk, Ltd.).

Herbicides

2, 4, 5-T UNFORMULATED ESTERS:—Kilbest M (Agricola Chemicals, Ltd.).

The Departments also announce the following addition to the list:—

"Chemicals for the Gardener." P.B.I. lawn wormkiller based on derris (Pan Britannica Industries, Ltd.).

The Ministry of Agriculture, Fisheries and Food reports one or two instances of pesticide products having been used for a purpose neither recommended by the manufacturer nor cleared under the Pesticides Safety Precautions Scheme. No assurance can be given, says the Ministry, that crops treated in an unauthorised way are safe for humans or animals to consume. Farmers and growers are reminded that in no circumstances should they use pesticide products for purposes not recommended on the label by the manufacturers unless they are conducting trials sponsored by the manufacturer or by official research workers and agreed by the Government.

Census of Distribution

ARRANGEMENTS FOR 1966-67

THE Board of Trade is preparing to take a census of retail distribution and of certain service trades relating to trade done in 1966. Forms for completion are not being issued until January 1967, but specimen copies have already been prepared and are being issued shortly to the largest retailers. Among smaller traders only a sample are being asked to make a return. The Board will not be able to give advance warning to those traders individually, as their names and addresses will not be known until businesses in the sample areas have been listed next year. Traders in those areas can, however, obtain information copies of the census forms by applying to the Census Office, Lime Grove, Eastcote, Ruislip, Middlesex. The Order prescribing the scope of the census and the matters about which

information may be required is the Census of Distribution (1967) Order, 1965 (S.I. 1965 No. 1408), copies of which may be obtained from H.M. Stationery Office, Kingsway, London, W.C.2 (price sixpence each). A similar sample survey was undertaken in 1957. A full census of distribution was carried out in 1950 and again in 1961. The census will not cover wholesale distribution, or the provision of services. Small retailers with a turnover of less than £5,000 a year are being asked only to indicate the nature of their business, their total takings during the year, and particulars of the number of persons working in the business. Those with a turnover of £5,000 a year or more are being asked, in addition, questions on wages and salaries; purchases; stocks; capital expenditure; credit sales; book debts; an analysis of turnover by the main classes of goods sold and services provided; the number of goods vehicles operated; and (in some areas) floor space. Large retailers, multiple organisations with ten or more branches and Co-operative societies are being asked about transport costs also.

Royal Society Medals

THREE AWARDS MADE

THE following awards of medals have been made by the President and the Council of the Royal Society: The Copley medal to Professor A. L. Hodgkin, Foulerton Research Professor of the Royal Society (working in the Physiological Laboratory, Cambridge), for his discovery of the mechanism of excitation and impulse conduction in nerve, and his outstanding leadership in the development of neurophysiology; The Davy medal to Professor H. W. Thompson (professor of chemistry, Physical Chemistry Laboratory, Oxford), for his distinguished contributions to infra-red spectroscopy and its application to chemical problems; and The Hughes medal to Professor D. H. Wilkinson (professor of experimental physics, Oxford University), for his distinguished experimental and theoretical investigation in nuclear structure and high energy physics.

Education in Chemistry

INSTITUTE APPEALS FOR £100,000

THE Royal Institute of Chemistry is launching an appeal for £100,000 with which to develop and extend its educational work over the next five years. Already the Institute, from its own limited resources, is spending £10,000 a year on the work, but, with the present trend away from science in the schools an increased effort is now urgently necessary if the Institute is to meet its charter obligation to ensure an adequate supply of properly trained entrants to the profession. Main emphasis is being placed on improving the teaching of chemistry at school level though attention is also being paid to re-educating practising chemists.

Customs Returns

MEDICINES YIELD £11 MILLIONS TAX

RECEIPTS from purchase tax on medicines in the year ended March 31 are

estimated by the Customs and Excise to be £11 millions (the same figure as for the previous year). The yield from perfumery, cosmetics and toilet preparations (£26.8 millions) is £2.3 millions up, and from photographic goods £600,000 up. Total income from purchase tax is estimated at £634.2 millions (£68.5 millions up on the previous year). The figures are included in the Customs & Excise annual report (H.M. Stationery Office, price 12s. 6d.).

SCOTTISH NEWS

Shortage of Pharmacists

SCOTTISH HOSPITAL REGION SURVEY

THE number of pharmacists in the Western (Scotland) hospital region is 31 per cent. below the establishment, a survey carried out for the Guild of Public Pharmacists by the region's pharmaceutical advisory committee reveals there were posts for 122 full-time and two part-time pharmacists but the staff comprises only eighty-two full-time and five part-time. The committee estimated that to provide an adequate service 129 full-time pharmacists and one part-time were required, giving a present shortage of 35 per cent. Examining the proportion of women entering the service, the committee found that between July 1963 and June 1965, twenty-one full-time women pharmacists had joined compared with ten full- and one part-time men. The possibility of recruiting married women for part-time service was considered "almost impossible." An age-distribution study among chief pharmacists showed that twenty-nine (74 per cent.) of the existing establishment were due to retire in the next twenty years. The committee comments that there are increasing demands on hospital pharmacists which affect the shortage. For example, many pharmacists now act as advisers during ward rounds, quality control is being carried out at hospital level, more information on drugs has to be given to medical staff, and there are increasing duties in the control of radio-active materials. The "grave shortage" of post-graduate students is blamed on the financial attractions of industry, and recent salary awards are regarded as "too little, too late." The committee also believes the future of the pharmaceutical service to depend upon an adequate supply of dispensing assistants.

IRISH NEWS

THE REPUBLIC

Benevolent Fund

ANNUAL DANCE IN DUBLIN

OVER 400 guests attended the annual dance of the Pharmaceutical Society of Ireland Benevolent Fund in Dublin on December 7. The function was graced by the presence of the lord mayor of Dublin and Mrs. Timmons. Mr. P. Gray filled the post of master of ceremonies. Winner of the Christmas hamper was Mr. T. O'Brien. Other raffle winners were:—Mr. F. Aylmer (electric blanket); Mr. M. Giblin (electric razor); Mr. S. McHugh (Christmas crackers); Miss B. Hannon (electric hair-dryer).

IRISH BREVITIES

THE NORTH

PRESCRIPTIONS dispensed in Northern Ireland during September numbered 758,216 (504,193 forms). Total cost was £445,284, an average of 140.95d. per prescription.

THE REPUBLIC

PROSPECTS for pharmacy in the coming decade will be examined at a symposium entitled "Whither Pharmacy?", being held under the auspices of the Irish Pharmaceutical Association in the College of Pharmacy, Dublin, at 8 p.m. on January 18. Speakers will include Sir Hugh Linstead (secretary, Franco-British Pharmaceutical Commission) and Mr. J. Burke, M.P.S.I., Dublin.

NEWS IN BRIEF

PUBLICATION of the *Quarterly Record* of the Proprietary Articles Trade Association is being discontinued.

THE index of retail prices in November was 113.6 (January 1962 = 100), compared with 113.1 in October.

SIR Nigel Poett became director of the British Productivity Council on December 17 in succession to Sir Charles Norris who has reached retirement age.

DURING a recent period of three weeks more than £30 of photographic equipment was stolen from displays in the pharmacy of D. S. Benton, Ltd., 78 High Street, Ramsey, Hunts.

FIRST two titles in the Royal Institute of Chemistry's lecture series, 1965, are "Some Aspects of the Chemistry of Opium," and "Viruses and the Chemotherapy of Viral Diseases."

THE Ministry of Health is offering training posts for hospital administration to forty-six men and women in England and Wales in 1966. Six similar posts are being offered in Scotland.

A CHIEF warrant officer in the United States Army has been arrested after 95 kilos of heroin had been found in his refrigerator. He is alleged to have smuggled the heroin into the United States from Europe.

THE British Rheumatism and Arthritis Association is granting £12,000 to endow six beds at a Winged Fellowship home at South Nutfield, Surrey, for the disabled and £10,000 to found a holiday hotel for arthritics in Scotland.

THE Committee, appointed in 1961, to inquire into the pharmaceutical services in Scottish hospitals (chairman Mr. J. B. Grosset, a member of Council, Pharmaceutical Society), has submitted its report to the Secretary of State, Scotland. A decision concerning possible publication of the report is awaited.

THE Import Duties (Temporary Exemptions) (No. 7) Order 1965 (S.I. 1965, No. 2099) provides for the extension until December 31, 1966, of temporary exemptions from import duty of most of the chemicals that would otherwise have become dutiable after December 31. It also provides for the temporary exemption from import duty during 1966 of certain other chemicals at present liable to import duty.

TOPICAL REFLECTIONS

By Xrayser

Selling to doctors

One of the points raised at the recent Edinburgh "teach-in" was connected with the costs incurred in gaining the interest of the doctor in the products of the pharmaceutical industry. The argument appears to have been very forcefully put by one of the speakers, Dr. D. L. Kerr, M.P., who went so far as to describe the doctor as the main agent of the drug industry—a remark which brought strong denial from Mr. G. Fryers (Nicholas Laboratories, Ltd.). Yet the fact cannot be denied that, with such a large proportion of the industry's output coming within the range of Schedule 4 or the Therapeutic Substances Act, the doctor is the only agent through whom such preparations may reach the public. It all depends on the meaning attached to the word "agent." The changing pattern of medical practice in recent years has had a marked effect on pharmaceutical activities, and on the relationship between the manufacturer and the pharmacist. Even the denial from Mr. Fryers does not alter the fact that the pharmacist is no longer cultivated by representatives of the industry, beyond an occasional courtesy visit to apprise him of what is being "detailed" to doctors in the current campaign. And there are quite a number of firms that do not even condescend to a courtesy call, indicating clearly that there has been a shift in emphasis away from the pharmacist. The doctor is in a stronger position to disseminate the industry's products than is the pharmacist. That that is recognised by the industry is evidenced by the efforts made, through literature and personal approach, to secure medical interest in a product. That is all perfectly natural. But it is idle to deny that, in bringing the matter to the attention of the physician, it is hoped that he may be sufficiently impressed to prescribe it. And if he does so he becomes the agency through which the drug will find a market.

An old recipe book

In search of a formula for a preparation which enjoyed a high reputation in the treatment of boils about sixty years ago, I dipped into an old recipe book of the kind kept by all apprentices at that time. It contained a wide variety of items for all purposes, and in all probability represents a collection of the secrets the apprentice-master had acquired from his own mentor thirty years previously. In its pages may be found a groping towards what has now become a highly specialised cosmetic industry, for in that now far-off day the druggist made his own lip salves, dentifrices, toilet creams and milks, shaving powders and perfumes. There is, therefore, nothing untraditional in the pharmacist of today handling the modern equivalent of those preparations which apparently satisfied another and perhaps less discriminating generation. But that not all lacked discrimination and personal preference may be seen in the case of Mrs. Harrison.

Mrs. Harrison

Who, you may ask, was Mrs. Harrison? I can't tell you. All I know of her is to be found in the pages of the recipe book, and it does not amount to much. The lady had her own teeth and she cleaned them with tooth powder. But Mrs. Harrison was a lady of independent mind, for she did not like camphor. Other people, presumably, were satisfied with the formula, which contained orris root, magnesium carbonate, prepared and precipitated chalks, sugar and camphor, with suitable colouring and flavouring. But a note beside the formula states most emphatically: "Mrs. Harrison—SINE CAMPHORA." And why, if she preferred it, should Mrs. Harrison not have it that way? "I am not interested," she may have said, "in the statement that camphor is good for my teeth and guards against dental decay. I am not concerned that you have brought it from Formosa specially. I want mine without camphor." And in those days, with the obliging personal service of the local druggist, Mrs. Harrison was duly provided with her special dentifrice.

DUBLIN LICENCE CONFERMENTS

More aid needed for education says Society president

TWENTY-SIX licence certificates were conferred at the annual ceremony at the College of Pharmacy, Dublin, on December 7—eight of them *in absentia*. Recipients included Mr. P. J. Crowley, first gold medallist in ten years, and former Cavan inter-county gaelic footballer Mr. H. B. O'Donoghue.

State Interference

The president of the Pharmaceutical Society of Ireland (Mr. J. P. O'Donnell) who presented the certificates, said that, owing to the interference of the State, between 40 and 50 per cent. of the population obtained their requirements of drugs and medicines through sources other than pharmacists, and there was State interference also in the sale of veterinary medicines. Mr. O'Donnell also referred to problems of financing pharmaceutical education. Until three years ago pharmacists had had to pay entirely for that education, but they had then received a subvention of £11,000. That sum, which had been paid annually for the past three years, did not meet their full financial obligations. Unless greater assistance were forthcoming a serious decision would have to be taken by the Council.

The president urged the new pharmacists never to forget the professional aspect of their calling. "The only thing we are trained for is professional pharmacy, and in this field there is a great contribution to make." The ceremony was "simple but significant." Special tribute was due to Mr. Crowley, the first gold medallist since 1955. The Pharmaceutical Society of Ireland was at times, the president feared, confused with bodies that acted as "pressure groups" for the protection of members. That was erroneous. The Society was a statutory body and as such its primary concern was to act in the public interest. Not least among services given by pharmacists was protection of man from himself—even when that clashed with the pharmacist's self-interest. Some people seemed to think that, when a pharmacist refused to supply a controlled preparation, he was just being "difficult."

A "trickle" of pharmacists was already going into industry and other spheres, and more were being attracted out of the country by better conditions abroad. "I fear that unless greater recognition is given to the true function of the pharmacist, this trickle will become a steady stream, and the community pharmacy in the sparsely populated regions will be replaced by the 'drug store' which is able to supply goods but not services."

Referring to the effect of the 1953 Health Act in diverting the population from pharmacies he said that any continuation of existing trends would jeopardise an ordered pharmaceutical service. He hoped the Minister for Health would keep that problem in mind when submitting his forthcoming White Paper to the *Dail*.

In the veterinary field the pharmacist was always at the farmers' service as supplier of animal medicines and agrochemicals. In recent years the State had

taken the initiative in organising national schemes for eradicating animal diseases. While "human" medicines were subject to turnover tax, veterinary medicines were exempt. They might be considered raw materials for a basic industry, but the fact remained that they were still medicines—some potent and even dangerous—and should be distributed only by those who appreciated the hazards inherent in their use or misuse. The year ahead would be important in Irish pharmacy because the State would have to decide, before the next academic year began, whether or no it required pharmacists.

Licence certificates were conferred as follows. —*First Class Honours*, Patrick John Crowley (gold medallist), Inchinagotagh, Skibbereen, co. Cork; Bernard Vincent N. Berney, Sunnyside, Kilcullen, co. Kildare; *Honours*, Annette Mary Keane, 21 Corrig Avenue, Dun Laoghaire, co. Dublin; Mary Ann O'Callaghan, 8 Park View, St. Joseph Street, Limerick; Margaret Mary

Plunkett, The Pharmacy, Croom, co. Limerick; *Pass*, Annie Carmel Brennan, Ave Maria, Monasteraden, Ballagaderreen, co. Roscommon; Charles Michael Browne, Hurst View Bungalow, Esmonde Road, Ennisclorthy, co. Wexford; William Jude Butler, Emmet Street, Birr, co. Offaly; Mary Bridget F. Concannon, 3 Oaklands, Salthill, co. Galway; Deirdre Cooney, Main Street, Manorhamilton, co. Leitrim; Gerard David W. Golden, Medical Hall, Westport, co. Mayo; James Joseph Grehan, 6 Keon's Terrace, Longford; Edmund Patrick J. Hayes, Pharmville, Castlereagh, co. Roscommon; Nicholas Paul N. Hennigan, Athleague, co. Roscommon; John Joachim McEvoy, Hillcrest, Bailieboro, co. Cavan; John Bosco O'Byrne, Ballykealy, Ballon, co. Carlow; Hugh Bernard O'Donoghue, Virginia, co. Cavan; Mary Patricia Perry, 13 Lindsay Road, Glasnevin, Dublin, 9.

In Absentia, Honours, Godwin Nosakhare Oviastu, 7 Havelock Road, Birmingham, 20, England; *Pass*, David Arthur Boles and John Alexander Boles, Phoenix Hill, Islandbridge, Dublin, 8; Michael Francis Mockler, 5 Oriel Terrace, The Demesne, Dundalk, co. Louth; Aidan Anthony O'Shea, The Pharmacy, Blackpool Bridge, Cork; Chandrakant Kantilal Shah, 11 Keslake Road, London, N.W.6; Therese Marian Sheehan, 33 Braemor Park, Rathgar, Dublin, 14 and John Williams, Circular Road, Kilkee, co. Clare.

INTERNATIONAL DRUG SAFETY TESTS?

Sir Hugh's suggestion in Health Service review

THAT an international agency should be set up to test the safety of new drugs was suggested by Sir Hugh Linstead (president of the International Pharmaceutical Federation), when he reviewed "Twenty Years of the National Health Service" before the Royal Society of Health's pharmaceutical group on December 10. The agency should preferably be under the auspices of the World Health Organisation; if that proved impossible, then under the Council of Europe. In terms of scientific man hours and of resources of hospitals and laboratories the cost of meeting the present requirements of the Dunlop Committee was heavy. Most countries at Britain's level of scientific development were doing the same work at the same heavy cost. It would pay to pool resources, parcelling out the work among different centres. Safety might be increased as a result.

One of the financial disabilities of the National Health Service was that it "offered just that much more than

it had the resources to provide." The suggestion that the Service should be "taken out of politics" and run by some form of public corporation with a grant-in-aid from the Treasury was not, in his view, politically possible. Nor did he think any income limit ought to be imposed. Such a system, if adopted on any large scale, was bound to lead to two standards of medical care.

There was reason to look again at the financing of the Health Service; instead of existing channels of revenue a proportion of the national gross product should be allocated to the Service. A health stamp should comprise the employee's contribution; industry's contribution might be a percentage of the payroll. There was much to be said for charges for use of the Service if their purpose was not obstructed by the frustrations of a means test. It might well be that regional hospital boards had fulfilled their early tasks and that the service could now probably run effectively without them.

OVERSEAS NEWS

ARGENTINA

Uniform Drug Prices

THE Ministry of Social Assistance and Public Health of Argentina has recently introduced a system for the uniform pricing of medicines and drugs throughout the country. Prices are to be increased by 15 per cent. in Buenos Aires and lowered in the interior, the aim being to enable chemists to compete with "mutual aid chemists" who, under the previous discount system had been able to undersell "legitimate dealers."

UNITED STATES

A New Antifungal Antibiotic

DISCOVERED "by accident," a new antibiotic reported at Chicago University by Professors E. D. Garber and J. Rippon is thought likely to be highly effective against fungus diseases in

human beings. The discovery is understood to have been made when a fungus that failed to grow in the test-tube was found contaminated by a "germ." Interaction between germ and fungus produced the antibiotic which, from tests on mice, appears non-toxic. Two varieties of fungal infection were prevented.

CEYLON

New Era for Ayurveda?

A THREE-member commission of inquiry to probe the difficulties facing the ayurvedic profession in Ceylon is being appointed by the Government. The need for the commission results from the Government's policy of developing ayurveda and removing "quacks." To prevent the misuse of antibiotics and sulphonamides, the Health Minister will restrict all such drugs to doctors with the M.B.-B.S. qualification.

IN PARLIAMENT

BY A MEMBER OF THE PRESS GALLERY, HOUSE OF COMMONS

A NUMBER of criticisms of the Post Office services were made in the House of Commons at question time on December 15. MR. JOHN BRUCE-GARDYNE asked if the Postmaster-General was aware about letter-post delays, and MR. ALICK L. BUCHANAN-SMITH, who asked for details of the average time taken for letters posted in London to arrive in North-east Scotland, were answered by MR. JOSEPH SLATER (Assistant Postmaster-General) who said the service was the same as given a year ago, and that letters posted in London by early evening were normally delivered on the following weekday except in remote rural areas. MR. BRUCE-GARDYNE said he knew of no instances of letters arriving with so little delay. MR. HERBERT R. GOWER spoke of the difficulties the lateness of postal deliveries caused for industrial companies and commercial organisations and their representatives. MR. ANTHONY WEDGWOOD BENN (Postmaster-General) said that an enormous amount of man-power would be entailed in making deliveries of night mail at an earlier hour. A balance had to be struck between costs and services. His information did not confirm that there had been a recent deterioration in the letter service, though the services generally in England and Wales were still affected by staff shortages. A review of the delivery arrangements in Birkenhead, aimed at ensuring that the first letter delivery would be completed in all parts of the town by 9.30 a.m., would take some time to complete. Latest arrangements for loading parcel mails would be reviewed after Christmas. In a written answer to MR. JOHN ASTOR on December 15 MR. SLATER said the Postmaster-General was considering replies by a number of organisations about an increase in the weight and size limits for overseas parcels.

Labelling of Food and Cosmetics

MRS. JOYCE BUTLER introduced, on December 21, her Bill to provide for the labelling of food and toilet preparations. The Bill, which has all-party support, was given a first reading.

Infant Milk Foods

The supply of infant milk foods is to be referred to the Monopolies Commission, announced MR. DOUGLAS JAY (President of the Board of Trade) in a written reply on December 22. The Commission is also to be asked to investigate the practice of limiting distribution to certain classes of retail outlet.

New Hospital

The new hospital at Lindley, Huddersfield, is to be opened during the Spring of 1966. That information was given by MR. LOUGHLIN in a written reply to MR. K. LOMAS on December 6.

Local Tax

MRS. MARGARET THATCHER was told by the Minister of Housing and Local Government MR. RICHARD CROSSMAN

in a written answer on December 14 that although he was convinced that rates must be replaced by a fairer local tax, its shape must depend on the future structure of local government.

Sodium Fluoride Tablets

MISS JOAN M. QUENNEL was told by MR. GEORGE THOMAS in a written answer on December 14 that the proceedings of the Poisons Board were confidential. The Board had in 1961 and 1962 considered dentifrices and mouthwash tablets containing sodium fluoride and recommended that they might be sold freely, provided they contained not more than 0.3 per cent. and 0.2 per cent. of sodium fluoride respectively.

Luxury Goods

MR. GEORGE DARLING (Minister of State, Board of Trade, refused to accept a suggestion by MR. W. HAMLING on December 7 that the Board of Trade should take steps to change the Customs classifications in order to control imports of luxury goods.

Health Centres in Scotland

MR. WILLIAM HAMILTON was given a written reply on December 8 stating that MR. WILLIAM ROSS (Secretary of State, Scotland) was anxious to encourage the establishment of health centres wherever local conditions were favourable. Such centres were planned for Glasgow as the city developed, and at East Kilbride proposals to associate services of general practitioners with those of local authorities were under discussion; he would consider proposals in respect of Glenrothes.

Hearing Aids and Sterile Syringes

When MR. HECTOR HUGHES asked the Minister of Health if he was aware of the high prices charged by hearing-aid manufacturers; and what were his plans to make such aids available to poor persons under the Health Service, he was reminded, in a written reply on December 13, that Medresco hearing aids are already available free under N.H.S.

THE MINISTER told MR. ENGLISH on December 13, that initial supplies of disposable sterile syringes had been sent to all Executive Councils for free distribution to general practitioners.

Bonus Offers and the N.H.S.

DR. WYNDHAM DAVIES asked the Minister of Health on December 20 what basic price the Ministry "was paying for Econocil V-K brand of penicillin-V potassium, B.P., for which some pharmacists received a bonus of 500 tablets free for every 1,000 ordered." He also wanted to know the Health Service pricing policy for bonus offers to pharmacists of Econocil V-K, Butazone, Oxymycin and Furan. MR. KENNETH ROBINSON (Minister of Health) said the price varied according to the size of the pack. He had not found it practicable to take separate account of individual bonus offers but their collective effect was taken into account in reimbursing to chemists the costs of drugs. He was

keeping the matter under review. DR. DAVIES commented "I presume the Minister is aware that this scheme could be used to by-pass his own scheme to finance proprietary preparations given by pharmacists if they are unscrupulous pharmacists. I hope he will do all he can to discourage this type of thing."

Preventive Medicine

MRS. JOYCE BUTLER asked the Minister of Health if he would set up a working party to recommend changes in the National Health Service to ensure it was primarily a preventive rather than a disease-curing service. MR. KENNETH ROBINSON, in a written answer on December 20, said he was aware of the importance of preventive medicine and was seeking to develop it whenever possible. He did not think that the appointment of a working party would assist.

LEGAL REPORTS

"Heroin Stock Should be in Safe"

SAID to be a drug addict, Michael Robert Gomer, unemployed and of no fixed abode, removed a skylight pane in the flat roof of the Oxford Street, London, branch of Boots, Ltd., made a hole in a ceiling to force a locked cupboard in the dispensary and steal gr. 50 of cocaine and 6,000 tablets of heroin. When a police officer reported the break-in at Marlborough Street, London, police court on December 15, the magistrate commented "Having regard to what we see in this court, where there are now up to twelve drug cases a week, why people don't keep that quantity of heroin in the safe is quite beyond me—particularly as they are, presumably, one of the most experienced firms of chemists in the country." Gomer, who was arrested at Dover while on his way to Paris with some of the proceeds of the robbery, admitted breaking into the pharmacy and stealing the drugs. He also admitted having been in unauthorised possession of heroin on five other occasions when he had deceived doctors into giving him prescriptions to which he was not entitled. He further admitted that, since he left his home in Edith Grove, Chelsea, two years ago, he had neglected to maintain his three young children and as a result his wife had had to draw £95 in national assistance towards their support. The magistrate sentenced him to one month's imprisonment, to run concurrently, on each of the last two charges, but sent him to London Sessions for sentence on the breaking and stealing charge. Having regard to the present-day drug traffic, said the magistrate, that charge was too serious a matter for him to deal with.

Sale Not Supervised

THE case had been reluctantly brought by the Pharmaceutical Society against one of its own members said Mr. A. C. Castle at Lincoln city magistrates' court on December 14, when Bailey Chemists (Lincoln), Ltd., 352 High Street, Lincoln, pleaded guilty to a sale of codeine otherwise than by or under the supervision of, a registered pharmacist; and an illegal sale of chlordi-

azepoxide, contained in Librium tablets. Mr. Castle said that on August 11 an inspector of the Society was sold by an unqualified woman assistant a bottle of codeine tablets. The inspector also saw another assistant make up a prescription for Librium tablets. The inspector was told the pharmacist had just gone out. Later inquiries revealed he was on holiday for two weeks. For the company it was said it was not a deliberate evasion but a mistake arising from non-arrival of a locum pharmacist. A fine of £10 was imposed on the company and costs of £10 10s. were awarded against them.

Counted Electronically

At Grimsby borough magistrates' court, when Kaputine, Ltd., Broadman Street, Oldham, Lancs, were charged recently with supplying four bottles of Topsy aspirin tablets marked as containing 30 tablets but containing 14, 23, 12 and 26 tablets respectively, defending solicitor told the court, after entering pleas of guilty to all charges, that the tablets were counted electronically, and that the method was "as accurate as it could possibly be." It appeared that the equipment became faulty and the company, after receiving various complaints, spent £600 on a new machine. The charges arose out of a sale by Edith Newman, trading as C. H. Newman at 203 Weelsby Street, Grimsby, of one of the bottles of Topsy aspirin containing fourteen tablets only. The other bottles were also found at the shop. A fine of £5 was imposed on the company on each charge, and costs of £5 9s. 6d. were levied.

COMPANY NEWS

Previous year's figures in parentheses

JOSEPH CROSFIELD & SONS, LTD.—Mr. V. Murtagh has been appointed technical director.

ALLEN & HANBURY'S (SURGICAL ENGINEERING), LTD.—Mr. C. W. Maplethorpe has retired from the board and has been succeeded as chairman by Mr. A. E. Bide.

THE Squibb division of Olin Mathieson Chemical Corporation, New York, has been incorporated as a wholly owned subsidiary, E. R. Squibb & Sons, Inc., with Mr. R. M. Furlaud, president and chief executive officer. Mr. R. W. Middlebrook has been appointed president of Squibb International, the division responsible for operations outside the United States.

DOLLOND & AITCHISON, LTD., are transferring the photographic side of their business to a new company—Dollond & Newcombe, Ltd.—with its own directors as follows: Messrs. H. M. Llewellyn (chairman), H. S. Newcombe (managing director), W. T. Collard, J. J. Mansfield and P. Wynne. Effective date for the reorganisation is January 1, 1966.

J. GODDARD & SONS, LTD.—Mr. C. V. Goddard, for the past thirty-two years chairman of the company, is retiring but will continue to serve on the board. The new chairman is Mr. Howard V. Tyler; a new director is Mr. R. McMath, of Manufacturers' Marketing Co. (USA), Inc., New York, U.S.A. Mr. H. M. Goddard (managing

director of the Leicester company) has been appointed a director of the New York company.

GLAXO GROUP, LTD.—The group is forming on January 1, 1966, a new subsidiary company, Glaxo International, Ltd., to co-ordinate services to its overseas pharmaceutical operations and maintain the sales activities of Glaxo-Allenburys (Export), Ltd., which will be a subsidiary of the new company. Board of Glaxo International, Ltd., will be Sir Alan H. Wilson (chairman) and Messrs. H. W. Palmer (managing director), R. A. Langridge, W. J. Hurran and H. C. Mace.

UNITED GLASS, LTD.—The group's English and Scottish glass container divisions are being formed into two new subsidiary companies. United Glass (England), Ltd., will consist of the group's factories at Sherdley, St. Helens, Lancs; Castleford, Yorks.; and Charlton, London, while United Glass (Scotland), Ltd., will control the factories at Shettleston, Glasgow; Portobello, Edinburgh; and Kinghorn, Fife. With Alloa Glass, Ltd., and Key Glassworks, Ltd., those companies will form the group's glass container operation. Mr. E. Tydeman is to become sales director, United Glass (England), Ltd.

ALBRIGHT & WILSON, LTD.—Agreement in principle has been reached whereby Albright & Wilson, Ltd., will increase its interests in Albright & Wilson (Ireland), Ltd., and Goodbody, Ltd., from 47½ per cent. to 80 per cent. of the issued share capital. The present majority shareholders, Messrs. J. W. Freeman and N. R. Goodbody and members of Mr. Goodbody's family, will retain a 20 per cent. interest in the Irish companies. Mr. Freeman, who has reached normal retirement age, will retire from the chairmanship but will continue on the board with special responsibilities for finance. Mr. Goodbody (the present managing director), will become chairman and Mr. P. E. Greville (present marketing director), becomes managing director. Goodbody, Ltd., which is at present an associate company of Albright & Wilson (Ireland), Ltd., will, as part of the new arrangements, become a wholly owned subsidiary of Albright & Wilson (Ireland), Ltd. The changes take effect early in 1966.

BUSINESS CHANGES

BERK, LTD., is the trading title to be adopted by F. W. Berk & Co., Ltd., on January 1, 1966.

G. KNOWLES (CHEMISTS), LTD., have moved to 202 St. Vincent Street, Birmingham, 16 (from Monument Road).

H. S. TURNER (CHEMIST), LTD., have purchased the business of Mr. J. Sutcliffe, M.P.S., 1 Fore Hill, Ely, Cambridgeshire. The new manager is Mr. R. Knights, M.P.S.

MR. T. B. BROOKS, M.P.S., has acquired the pharmacy of Mr. H. W. Hughes, M.P.S., 93 High Street, Street, Somerset. Mr. Brooks will trade under his own name both at that address and at his established business at 157 High Street.

W. T. HEY & SON, LTD., are closing down the general pharmacy side of

their business at 7 Low Ousegate, York, shortly, having sold the property. They are, however, retaining their King Street property, from which they will conduct agricultural and animal medicine business, and also the wholesale and retail wine business.

THE name of the new company formed jointly to merge the pharmaceutical wholesaling interests of B.D.H. Group, Ltd., and Glaxo Group, Ltd. (see C. & D., August 14, p. 152), is **VESTRIC, LTD.** The new company will commence trading on January 1, 1966. Head office is at Chapel Street, Runcorn, Ches (telephone: Runcorn 4321). Some subsidiaries of the company will continue trading under their existing or slightly modified names subjoined by "branch of Vestric, Ltd." Others will take the title of the company.

Appointments

KODAK, LTD., have appointed Mr. D. Shattock manager of their dealer sales division from January 1, 1966, on the retirement from the company of Mr. L. C. Downing.

PERSONALITIES

SIR ROBERT ROBINSON, Emeritus professor of chemistry at Oxford University, and a former President of the Royal Society, has been elected an honorary member of the Academy of Sciences of the Socialist Republic of Rumania.

MR. H. CROUCH, who is retiring in the New Year from the position of general sales manager, United Glass, Ltd., has been with the company for fifty years. He started as an office boy, but soon developed his interest in sales. He was appointed general sales manager in 1959, and subsequently was appointed a director of the English division.

DEATHS

APLIN.—Recently, Mr. John Henry Aplin, 39 Hilperton Road, Trowbridge, Wilts. Mr. Aplin qualified in 1907 and was for many years in business in Trowbridge. The business is now carried on by his son Mr. R. J. Aplin, M.P.S.

BARROW.—On December 5, Mr. Peter Albert Barrow, M.P.S., Plot 11, Gallows Field, Dudsbury Road, Fern-down, Dorset. Mr. Barrow qualified in 1921.

BINNIE.—On December 17, Mr. William Hugh Binnie, M.P.S., 67 Clydesdale Road, Mossend, Bellshill, Lanarks. Mr. Binnie qualified in 1923.

BROWN.—In hospital on December 15, Mr. Peter Kinninmouth Brown, M.P.S., 98 East Claremont Street, Edinburgh, 7. Mr. Brown qualified in 1909.

BYRNE.—Recently, Mr. John Byrne, popular hall porter at the College of Pharmacy, Dublin, Eire, aged forty. Only ten months ago Mr. Byrne took over the position following the unexpected death of his father-in-law, Mr. Paddy Byrne, who had been well known to two generations of pharmacists. A poignant feature is that Mr. Byrne's only child—a nine-year-old boy—died unexpectedly a fortnight earlier.

FALLON.—Recently, Mr. Edward Joseph Fallon, M.P.S.I., Kinvara, co. Galway, Eire. Mr. Fallon, who qualified in April 1932, opened his pharmacy in Kinvara about fifteen years ago.

FOWLER.—On November 21, Mr. Phillip John Fowler, M.P.S., La Smeraldina, Corso Mazzini 56, San Remo, Italy. Mr. Fowler qualified in 1907.

LANE.—On November 24, Mr. Albert Edward Lane, Charmante, Worcester Road, Bransford, nr. Worcester. Mr. Lane qualified as a chemist and druggist in 1919 and retired in 1959.

MORRIS.—On December 7, Mr. William Morris, M.P.S., 1 Jasmine Road, Kilmarnock, Ayrshire. Mr. Morris qualified in 1931.

NAISH.—On December 3, Mr. Bertie Osborne William Naish, M.P.S., 430 Gander Green Lane, North Cheam, Sutton, Surrey. Mr. Naish qualified in 1928 and was a partner in the business of Bishops Chemists, 374 Sutton Common Road, Sutton, for over twenty years.

ROWLANDS.—In a motor accident on December 15, Mr. Harold Rowlands, M.P.S., Ridley Lane, Mawdesley, Ormskirk, Lancs. Mr. Rowlands qualified in 1955.

SILLITOE.—Recently, Mr. Arthur Leonard Sillitoe, 1 Clarendon Towers, Lennox Road, Southsea, Hants. Mr. Sillitoe qualified in 1920 and was formerly in business in High Street, Le-on-the-Solent, Hants, from 1921 to 1949.

LEEDS

Outlook: Good

ADDRESSING a meeting of the Society's Leeds Branch recently, MR. K. HOLLAND (a member of Council) discussed ways in which the practice of pharmacy had changed over the past thirty years and general lack of appreciation of the pharmacists' modern rôle in general practice, the hospitals and industry. The Society's Practice Committee, with its sectional subcommittees that included also representatives of general practice, hospital,

WEATHERILL. — On December 7, Mr. Thomas Hubert Weatherill, M.P.S., 67 The Broadway, Chesham, Bucks. Mr. Weatherill qualified in 1911.

INQUESTS

Unintended Overdose.—It appeared that a woman suffering from sleeplessness had taken an overdose of sleeping tablets without realising the dose was a lethal one, said the Birkenhead Coroner, on November 9, when he recorded a verdict of accidental death at the inquest on Mrs. Elizabeth Gladstone, 40 Dacre Street, Birkenhead. He said she died of barbiturate poisoning after taking an overdose of sleeping tablets on November 4. She had taken an overdose of tablets in 1963, but it was clear that she was not suicidal. Mrs. Catherine Migall, 59 Dacre Street, who had been keeping Mrs. Gladstone company, said that on the evening of November 3 they decided to sleep in the kitchen, as it was warmer there. Several times during the night Mrs. Gladstone woke and each time drank a cup of tea. In the morning Mrs. Migall found her dead. A consultant pathologist said it was likely Mrs. Gladstone took tablets with each cup in her anxiety to sleep.

Malathion Idiosyncrasy?—An open verdict was recorded by the Oxford coroner at an inquest on November 19 on Mr. William J. Baker, Bronwydd Road, Carmarthen, who died in Churchill hospital, Oxford, on August 20

after being taken ill on July 28. Mr. Baker's daughter said that, on July 24, her father complained of a dreadful smell in their garage. It was a windy day and a bottle of insecticide she had bought had fallen on its side in a shelf. The bottle appeared undamaged but the contents had drained out. Four days later he complained of a pain in his arm. The pain spread, and next day he collapsed and was taken to hospital. A biochemist told the coroner that the insecticide contained malathion. Unless the man suffered from a personal idiosyncrasy, it would be the first known case of a man dying as a result of malathion poisoning. The "least unlikely" possibility was that Mr. Baker had a personal idiosyncrasy malathion. Dr. John Hall (senior pathologist, Boots, Ltd.), said they had only had two complaints of a medical nature from customers since the insecticide was introduced in 1960, neither of which had been serious. A neuro-pathologist said Mr. Baker had died from broncho-pneumonia due to respiratory failure resulting from a disease affecting the spinal cord, peripheral nerve and liver. A number of poisons could have produced the conditions, but she had not been able to find any recorded case of malathion being responsible. The consultant neuro-surgeon at the Churchill Hospital said: "It is impossible to deny the possibility of a previously unreported disease, but it looks very much more like a poisoning than a natural cause."

BRANCH EVENTS

industrial and veterinary pharmacy, was making a real endeavour to define balanced and realistic standards for all those branches. There was complete agreement between members and headquarters, said Mr. Holland, on ways in which the law relating to pharmacy should be changed. The difficulty lay in convincing politicians that the changes needed to be made. One positive way was by techniques of public relations, which the Council was studying, including training pharmacist

spokesmen for television and radio, developing relations with the Press, staging exhibitions and lobbying Members of Parliament. The Council was doing its best to implement the report of the committee on the General Practice of Pharmacy, which had been accepted by most members, as the special meeting at the Albert Hall had proved. Mr. Holland believed that the profession's future was good. It was the job of today's pharmacists to make sure that the students had a secure future.



BRANCH OFFICERS AND GUESTS: Group photographed at recent annual dinner of Guildford and District Branch, Pharmaceutical Society of Great Britain. Left to right, Miss Money (mayoress of Godalming), Mr. J. C. Bloomfield (president, Pharmaceutical Society of Great Britain) and Mrs. Bloomfield, Mr. E. C. Grigson (chairman, Guildford Branch) and Mrs. Grigson, and Mr. E. W. Gearey (chairman, Executive Council for South-west London and Surrey) and Mrs. Gearey.

NEW PRODUCTS

PHARMACEUTICAL SPECIALITIES

"S" Variant Replaces Original.—Atomid introduced by the pharmaceuticals division of Imperial Chemical Industries, Ltd., Alderley Park, Macclesfield, Ches., in 1963, was a combination of clofibrate with androsterone. At that time, state the manufacturers, the evidence indicated that androsterone was a necessary constituent, but continued clinical experience has shown that clofibrate (Atomid-S) alone exerts the same correcting action on the abnormal blood lipid and coagulation factors associated with coronary heart disease. The original product is therefore being withdrawn and from December 31, only Atomid-S will be available. The 250-mgm. Atomid-S capsule is red and spherical.

Redesigned Pack.—Sandoz Products, Ltd., 23 Great Castle Street, London, W.1, have redesigned the pack of twenty tablets Cafergot Q. Instead of



the flat "shell and slide" box the tablets now have a rectangular box with "tuck-in" flap and are now foil-packed in units of two. The new pack, say the manufacturers, is designed to save shelf space and to be more convenient to the patient.

OVER-THE-COUNTER MEDICINALS

Redesigned.—Since the announcement that Panets paracetamol analgesic, manufactured by Ward Blenkinsop, Ltd., is being marketed by the Optrex Group, the packaging and presentation of the product have been revised by Richard



Lonsdale-Hands Associates, Ltd., who have designed the counter display outer, carton and the 50-tablet plastic drum. The blue and pink outer carton gives instructions for use and carries a leaflet explaining the advantages claimed for paracetamol compounds, especially when the stomach is sensitive or disturbed. The phial contains seventeen tablets.

SUNDRIES

Hairpins in a New Pack.—Whitecroft-Scovill, Ltd., Whitecroft, Lydney, Glos, describe their new pack of Charm Polypak hairpins in fine and heavy, straight and waved, brown and black, and in a variety of lengths from 1½ to 3 in. as break-away from the more customary roll.

Domestic Descaler.—Albright & Wilson (Mfg.), Ltd., 1 Knightsbridge Green, London, S.W.1, are marketing a new Calgon domestic descaler in 4-oz. sachet for use in descaling kettles and other small domestic appliances. The product, a powder, is claimed to have advantages in transit, etc., over liquid descalers. The sachets are sent out in display outer of twelve.

TRADE NOTES

Two Sizes Only.—Smith & Nephew Pharmaceuticals, Ltd., Bessemer Road, Welwyn Garden City, Herts, give a reminder that their Wellmorm tablets, 650 mgm. (gr. 10), are available in containers of fifty and 250 only.

Changes of Size.—MOORE MEDICINAL PRODUCTS, LTD., Waverley House, Aberdeen, the large pack of Codella cream is now a tube containing 3 oz. Price is unchanged.—WARD, BLENKINSOP & CO., LTD., Fulton House, Empire Way, Wembley, Middlesex, have replaced imperial with metric packs of Pavacol and Pavacol diabetic (100/500 and 2,000 mls respectively); Octalex (8-gm. tube); and Penotrane jelly urethral (7-gm. plastic injector). Prices are unchanged.

Swim Caps.—WILLIAM FREEMAN & CO., LTD., Suba-Seal Works, Staincross, Barnsley, Yorks, claim that their Suba-seal range of fashion-styled swim caps is "unbeatable for price, quality and presentation." Floral caps in a wide choice of colours and sizes are individually packed in plastic beach bags with draw string fastenings and descriptive disc. Point-of-sale material is available.—A folder in full colour illustrates the 1965-66 range of fashion swim-caps available from W. W. HAFENDEN, LTD., Sandwich, Kent.

Policy Changes.—Unicliffe, Ltd., Unimart House, Stonar, nr. Sandwich, Kent, state that, when the Resale Prices Act became law in 1964, the Registrar of Restrictive Trading Agreements insisted that, for purposes of registration under the Act, slimming-aid products should be separately classified as slimming foods rather than as proprietary medicines. The company have been advised by counsel that, in view of that separate classification, the chances of securing exemption for those products from the Act are negligible. The directors have come to the conclusion that, were they to persist in trying to secure

the right permanently to continue maintaining the price of those products, they would be wasting the time and resources of the courts, trade associations and the company itself. They now consider that the most realistic and sensible policy they can pursue is to continue strongly to recommend adherence to the recommended retail consumer selling prices of their slimming-aid products. "but in future we will not restrain to the point of cutting off supplies from, or taking legal action against, any retailer who sells the company's slimming aids at other than recommended retail prices." Products affected by that decision are Limmits, Limmits crackers, Trimetts, Trimetts trimmers and Limmisax. It is the company's intention to maintain prices for the T.C.P. range of products and for the company's proprietary medicines. The application to the Restrictive Practices Court to exempt those products from the provisions of the Resale Prices Act is being pursued.

Premium Offers

KIMBERLY-CLARK, LTD., Larkfield, nr. Maidstone, Kent. Chiefs 3-ply paper handkerchiefs. "Twopence off two."

J. & E. ATKINSON, LTD., 17 Bessemer Road, Welwyn Garden City, Herts. Skin Deep and Skinfare products. Four products in one pack—enough of each to last a couple of weeks at a reduction of 13s. 6d.

DOROTHY GRAY, LTD., Marshall Road, Hampden Park, Eastbourne, Sussex. 2-Minute Magic skin cleanser. 8-oz. pack (double normal size) at half the price. From January 15 to February 28, 1966, only).

Discontinued

GLAXO LABORATORIES, LTD., Greenford, Middlesex. Betnelan half-strength and Betnesol half-strength tablets (packs of 500).

PARKE, DAVIS & CO., Staines Road, Hounslow, Middlesex. Pituitrin (box of 100 0.5-mil ampoules); cholera vaccine (rubber capped vial of 10 mls); Haliverol (vial of 25 capsules); Pituitrin (box of 100 1-mil ampoules).

MAKERS' ACTIVITIES

Present to Spastics.—A gift of playground equipment has been made by the employees of MacFarlan, Smith, Ltd., Wheatfield Road, Edinburgh, 11, to the Edinburgh Spastics' Association. In handing over the gift, Mr. A. Forsyth (managing director), said that the company's greeting card had been produced by the Scottish Council for the Care of Spastics.



QUARTER-CENTURY PRESENTATIONS: Mr. W. A. Nesbit (right), export manager of Thomas Morson & Son, Ltd., Ponders End, Middlesex, completed twenty-five years' service with the company earlier this month, and is shown receiving a gold watch and a long service certificate from Mr. G. T. Morson, the company's managing director. Also in the picture are Messrs. E. G. Peppiatt (production director) and A. S. Jerwood (financial director).



The CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

ESTABLISHED 1859

Published weekly at
28 Essex Street, Strand, London, W.C.2

TELEPHONE: CENTRAL 6565

Training Pharmaceutical Scientists

IN joining others in congratulating Mr. A. G. Fishburn on his having been awarded the Harrison Memorial medal (see p. 632), we make so bold as to congratulate also those who heard his address or who read it in print. For it seems to us that his remarks, based on a long experience in pharmaceutical formulation in industry following previous experience as a teacher of pharmacy, are based on a sound appreciation of the value and importance of a basic educational standard to be attained by all pharmacists, and to form the starting-point for any further training of the type of scientific worker required in the modern set-up of the pharmaceutical industry.

Almost imperceptibly there has emerged in many schools of pharmacy an academically minded science graduate inadequately equipped for the practice of pharmacy in either its general-practice or hospital aspects yet accepted as suitable for instructing others in pharmacy or undertaking a leading position in pharmaceutical research. Mr. Fishburn's point of view, running counter to the acceptance of such a situation, was that an important requirement in pharmaceutical education is that the basic training should be suitable for entrants into retail pharmacy, who are numerically more important, and that alternative schemes for a direct route to an independent "scientific" training have so far proved impracticable. Indeed "it is necessary that those who are to be concerned with product development should be familiar with the methods of retail practice."

On that foundation the entrant into industrial pharmacy may, and in fact will, have to build a structure of advanced science that will take him to heights well above the knowledge of the retail majority. Unless, however, he shares with them that basic training his capability of developing those other desiderata Mr. Fishburn lists as called for in the pharmaceutical scientist may be limited and must be in doubt.

It is not our purpose here to elaborate on the ingredients of the further training of the pharmaceutical scientist. Mr. Fishburn has brought to bear on the subject the "speculative and inventive" mind that he looks for in those who seek to take part in the work of his department. There may be other routes to the same objective but we feel that, to be successful, any proposals must stem from a similar understanding of the essential interplay between training, character, and the ability to show initiative in new fields. While paying tribute to the traditional high standards of the profes-

sion, the Harrison medallist emphasises that there must be progress not merely in the approach to the pharmacist's higher scientific training, but also in the basic syllabus. If the "outlook of a dispenser" is inadequate to the problems of industrial formulation, it is not even adequate, surely, for the problems of general practice in the conditions of today.

The Harrison Memorial lecture 1965 merits the closest study by all those concerned with pharmaceutical education as by all those engaged in pharmacy, and the constructive thought that went into its preparation will, we may hope, inspire equal reflection from others so that the outcome in improved training at all levels may be the fullest attainable.

What is Trade Refuse?

THE old question what is and what is not trade refuse for removing which the occupiers of the premises must pay may soon be resolved. The Association of Municipal Corporations, representing borough councils, has been asked to carry out a survey that could lead to a change in the law. The request comes from the London Boroughs Committee, following representations by Lambeth borough council. That council told the Committee that it had had under consideration the question of distinguishing between domestic and trade refuse and considered that existing legislation was far from satisfactory, because it gave no clear definitions of domestic household and trade refuse. The council suggested that the situation should be remedied by defining domestic refuse as that arising from the occupation of a private dwelling house and trade refuse as that emanating from any other premises in which trade or business is carried out for profit. It went on to suggest that representations should be made to amend the present law along those lines.

ECHOES OF THE PAST THE SIMPLE CORDIALS

From "*The History of Life and Death*," by Francis Bacon, Lord Verulam, Viscount St. Albans, London, 1676.

HEREAFTER follow the name only of the *Simple Cordials*, seeing their Vertues are sufficiently known.

Hot	Hot
Saffron	Clove-Gilly-flowers.
Folium Indum.	Orange-flowers.
Lignum Aloes.	Rosemary.
Citron Pill or Rind.	Mint.
Balm.	Betony.
Basil.	Carduus Benedictus.
Cold	Cold
Nitre.	Juice of sweet Oranges.
Roses. Violets.	Juice of Pearmains.
Strawberry-leaves.	Borage.
Strawberries.	Bugloss.
Juice of sweet Limons.	Burnet. Sanders.
	Camphire.

Seeing our speech now is of those things which may be transferred into Diet, all Hot Waters, and Chymical Oyls, (which, as a certain Trifler saith, are under the Planet Mars, and have a furious and destructive force) as also all hot and biting Spices are to be rejected, and a consideration to be had, how Waters and Liquors may be made of the former Simples: not those phlegmatick distilled Waters, nor again those burning Waters of Spirits of Wine, but such as may be more temperate, and yet lively, and sending forth a benign Vapour.

I make some question touching the frequent letting of Blood, whether it conduceth to long life or not; and I am rather in the opinion that it doth, if it be turned into a habit, and other things well disposed: for it letteth out the old juice of the body, and bringeth in new.

Pharmaceutical Society of Ireland

MONTHLY MEETING OF COUNCIL

THE Council of the Pharmaceutical Society of Ireland, at its monthly meeting in Dublin on December 14, gave approval to a postal course in veterinary pharmacy to be organised by the Post-graduate Education Committee, the course to be based on the current pharmacology course and conducted on academic lines.

MR. R. J. POWER, as a member of the veterinary sub-committee, spoke in favour of the course pointing out that Mr. C. S. O'Connor, a representative of the College on the Committee, had been asked by members of the veterinary profession to organise a course along such lines. THE PRESIDENT (Mr. J. P. O'Donnell) held that the proposed course would be of considerable benefit to pharmacists, who could provide a service and would be able to give advice on operating national campaigns aimed at eradicating animal diseases.

Moving approval of the proposal MR. M. L. CASHMAN said that pharmacists could also point out the need for observing strict aseptic conditions in cow byres and out-houses (an observance that would do much towards eliminating mastitis). Adding his support, MR. T. R. MILLER said it was imperative that pharmacists, particularly in rural areas, should be brought up to date in a field that had a considerable part to play in their livelihood. MR. D. J. KENNELLY said there was no reason why rural pharmacists could not add their help to that of the depôts that were so widely scattered in the proposed national campaign for eradicating mastitis. He could assure pharmacists of the older school, who might think such courses beyond them, that they were anything but difficult.

Post-graduate Studies

The Council also considered a letter from MR. D. W. P. BOYD (director of the Post-graduate Education Committee) asking whether the Council approved of post-graduate work being undertaken by bodies other than the Committee, which had been appointed by the Council to function throughout the country. His inquiry was prompted by a letter sent by the Council to a pharmacist in Cork on the subject of post-graduate studies. DR. BOLES said that Mr. Boyd had asked him to bring the matter to the attention of the Council because, if a postal course were organised in Cork, it could not be under the control of the Society. THE PRESIDENT replied that any post-graduate education courses should be under the auspices of the Committee. That would need to be made clear. MR. M. F. WALSH said there was a principle involved. The committee would certainly help their colleagues in Cork, but responsibility would have to be defined. There would have to be an over-riding organisation possessing the necessary control and authority.

MR. MILLER: Something on the lines of Pharmacy Week, which was run from Dublin, but organised by a local Committee in Cork?—MR. WALSH: Yes.

THE PRESIDENT suggested that, if pharmacists in Cork wished to organise such a course, they should get in touch with the Post-graduate Education Committee so that efforts could be synchronised. He told MR. CASHMAN, who declared that any group that wished to organise a course without reference to the Society was entitled to do so, that the Society would like it to be understood that there was a committee, under the auspices of the Society, and the proper thing was to get in touch with it. THE REGISTRAR (MR. J. G. Coleman) said there had never been any intention of superseding Mr. Boyd. It had been suggested at the November meeting that they should help Cork by providing equipment and lecturers if required. An assurance was given to MR. WALSH by MR. CASHMAN that no other

group could call itself the Post-graduate Education Committee, and Mr. Walsh said that the committee would work in closest liaison with Cork to see that the necessary courses were provided.

Twenty-five Years' Service

THE PRESIDENT congratulated Mr. Corrigan on having, while attending the October meeting in Cork, completed twenty-five years of efficient and devoted service as a member of Council. He expressed the wish that Mr. Corrigan might be spared another twenty-five years to help in the Council's work. MR. CORRIGAN suitably returned thanks.

The following were announced as having been nominated to represent the various pharmaceutical bodies on the Post-graduate Education Committee for the 1965-66 session:—COUNCIL, Dr. W. E. Boles and Mr. R. J. Semple; ASSOCIATION OF HOSPITAL AND PUBLIC PHARMACISTS, Miss J. Burke and Mr. P. M. Browne; PHARMACEUTICAL AND MEDICAL REPRESENTATIVES' ASSOCIATION, Messrs. M. F. Walsh and T. MacGiolla-Rioge; COLLEGE OF PHARMACY, Messrs. C. S. O'Connor and H. A. Stevenson; IRISH DRUG ASSOCIATION, Messrs. W. J. Gardner and D. A. O'Sullivan; PHARMACY BRANCH OF LOCAL GOVERNMENT DEPARTMENT OFFICIALS' UNION, Messrs. F. J. Barragry and E. P. Hughes; PHARMACEUTICAL FEDERATION, No nomination yet received.

MR. CASHMAN reported that with Messrs. Corrigan, Kennelly and R. J. Power he had, with Professors J. Cannon and R. F. Timoney, met representatives of the Pharmaceutical and Allied Industries Adaptation Association. They had discussed the draft of a proposed drugs control system prepared by the Committee, and intended to call a further meeting to approve the final copy for submission to the Department of Health.

THE PRESIDENT reported that the Society had been represented at the funeral of Mr. D. J. O'Malley (chairman, *Comhairle Na Nimheanna*) by Mr. Maurice Power. It was decided to send a letter of sympathy from the Council to Mr. O'Malley's widow and family. All members of Council would be sorry to learn that Mr. John Byrne, the hall porter, had died since the previous meeting, and only a fortnight after the death of his nine-year-old-son. The sympathy of the Council was extended to Mr. Byrne's widow.

A letter from the Department of Health about a complaint from the Council that medicines were being supplied to members of the public by wholesalers acting on the instructions of the Health authorities stated:

I am directed by the Minister to state that inquiries have been made from the Health authorities in the four areas referred to in your letter of June 25—Galway, Kildare, Donegal and Tipperary. The replies indicate that no cases of this kind have arisen in Donegal, Galway or South Tipperary. Some cases of this kind have occurred in North Tipperary and in County Kildare, but the Tipperary North Riding and Kildare county councils have now informed the Department that the practice has been discontinued in their respective areas.

The Council referred to the Practice of Pharmacy Committee suggestion from Mr. Patrick Fahey, Tullamore, that a distinctive dress and emblem should be adopted for pharmaceutical assistants. MR. WALSH, supporting the suggestion, said that it would help raise the status of members.

The Council agreed to devote £100 towards the travelling expenses of a party of twenty-seven pharmacy students who had been invited to participate in a tour of universities and pharmaceutical establishments in West Germany next Easter. MR. CASHMAN explained that the trip was being subsidised by the West German Government under the student-exchange scheme.

The question (deferred from the November meeting) whether the Council should recognise practical training in

a pharmacy, while awaiting an opportunity to present himself again, by a student who had failed the degree examination, was reconsidered. By a substantial majority it was agreed that the year's practical training should be post-graduate. It was also decided that a student who had been allowed a section of the examination should be permitted, on application to the Council, to complete a portion of the year's practical training, provided not less than six months of the total was completed after passing the degree examination. MR. WALSH thought Council's decision unwise. MR. POWER said that, at the previous meeting, he had opposed the suggestion that the year should be taken after graduation but, having given the matter further consideration, he was happy with the decision. The person with a degree would not be put in an unfavourable position *vis-a-vis* the person who failed.

A letter from MR. J. B. MURPHY, who was unable to attend said that he did not feel that any student working full-time in a pharmacy would have the inclination or the energy to study sufficiently at night to pass the examination. MR. LOUGHMAN said they were interpreting the rules in a sensible way by allowing a person who had secured

half the examination to spend six months at the practical. It would not be fair to expect the students' parents to bear the expense of another year while students leaving secondary school could command posts at attractive salaries.

The Council confirmed the rejection of an application from a student requesting that she should be permitted to complete her year's practical training in a company pharmacy not approved for the purpose because none of the shareholders was a pharmaceutical chemist.

A letter was received from Mr. F. Barrow (registrar, Pharmacy Board of South Africa) enclosing a sealed copy of the recent reciprocity agreement (see *C. & D.*, September 25, p. 318). The Council expressed approval of the agreement and decided to convey felicitations to Mr. Barrow.

The deaths of Ellen Raftery, M.P.S.I., Edward J. Fallon, M.P.S.I. and Louis Elliman, L.P.S.I., were reported by THE REGISTRAR.

Mrs. Annette Keane (née Duddy), L.P.S.I., who submitted her marriage certificate, was granted change of name in the Register.

(To be concluded)

A REAPPEARANCE IN NEW FORM

Tenth edition of "Cooper and Gunn"

Dispensing for Pharmaceutical Students (Cooper & Gunn)

Revised by C. GUNN, B.PHARM., F.P.S., and S. J. CARTER, B.PHARM., F.P.S. Pitman Medical Publishing Co., Ltd., 46 Charlotte Street, London, W.1. $9\frac{1}{2} \times 7\frac{1}{8}$ in. Pp. vii + 620. 90s. Eleventh edition.

FIFTEEN years have elapsed since the tenth edition of this book appeared, and the present revision has long been overdue. For many years teachers and students alike have had to learn how to do without "Cooper and Gunn," though much of the book's earlier influence will have remained. Reviewing the book has not been easy: The larger-than-average-size pages are many, and most of the printed material is arranged in two columns. Part I is devoted to general dispensing, and Part II (much the larger part) to sterilisation. The reviewer is left with the impression that the book is of uneven merit. There is much to praise, but much to condemn. Clearly the authors are well aware of the shortcomings of the Imperial system of weights and measures, and they appear to advocate its early abandonment, but they have not been capable of that act of faith themselves in Part I of the book, where nearly all the dispensing exercises have been written in the Imperial system, using the signs which the British National Formulary recommends should not be used by prescribers, and with the quantities expressed in Roman numerals. It is also surprising to see most of those exercises written in full (but not always correct) Latin. The fatuity of the method is particularly striking in exercise 14.2. Many of the dispensing exercises are presented in a way that is totally unrelated to current prescription-writing practice. Certain Latin abbreviations are convenient, and will no doubt persist for a long time, but beyond them medical students are not taught the use of Latin. Many of the exercises in the older editions of the book have remained unchanged in Part I of the new edition. One suspects that, in some instances, it was impossible to find modern examples to illustrate some particular point of compounding technique. In that case would it not have been better to abandon the exercise altogether? It is rather disturbing to find a mixture containing "Acidi Borici 1 G" in each dose following a statement that that substance is "commonly prescribed in a quantity greater than will dissolve." There are many other examples of the retention of the most unlikely mixtures and archaic drugs in order to illustrate certain principles. But dispensing is no longer like this, and to pretend that it is renders no service to pharmacy. Some chapters in Part I are, however, good. Those dealing with emulsions, ointments and creams have been extensively revised, and much useful new material has been added. There is much common ground between those sections, and the student would do well to consider them to-

gether. The chapter on eye and ear drops is also up-to-date and beyond reproach. The last-named chapters will be of value to retail and hospital pharmacists. The chapter on tableting (scarcely dispensing!) also contains much useful information on the theory and practice of tablet making and it has an excellent bibliography. The section on incompatibility rests largely on examples from the past. Fewer doctors today are willing to wander beyond the confines of the B.N.F. or B.P.C., unless they are prescribing proprietaries. The dispensing of proprietaries is discussed in a short chapter and Part I is concluded with a chapter dealing with medical gases and some of the equipment used in their administration. Part II of the book deals almost exhaustively with sterilisation practice and it also contains a wealth of theoretical information. There is an extensive bibliography.

"Patient, Careful" Writing

One must admire the patient care that has gone into writing this part of the book, which will be of the greatest value to all engaged in this field. The basic processes of sterilisation by heat, gases and radiations are discussed at length, and aseptic processing and sterility testing are dealt with adequately. Of particular interest are chapters on the formulation of injections, and on containers and closures and the properties of the materials of which they are made. For the student there are many examples of preparations sterilised by heat or prepared aseptically, along with extremely sound advice on the avoidance of calculation errors. The processes to be followed are described in minute detail. One might venture the criticism that, in leaving nothing to chance, the author has also left nothing to the student's imagination! One is also inclined to doubt the explanation offered for the greater stability of adrenaline tartrate compared with adrenaline hydrochloride. A most helpful feature is the provision of information about the sources and suppliers of the many items of equipment used. Eight useful appendices contain much information about reducing agents and antioxidants, pyrogen testing, methods of sterilising and stabilising B.P. and B.P.C. injections, pharmaceutical Latin (much of it, alas, old-fashioned and irrelevant to present-day prescribing), posology and answers to calculations. It is a pity that many printing errors and mis-spellings have gone undetected. "Desiccate" is repeatedly misspelt, and some confusion caused through the lack of uniformity in the use of capital letters for official preparations, as in the calculation examples towards the foot of p. 33. The continued success of the book may well depend on Part II and on those other sections, such as that on tableting, which lie outside dispensing. The authors may think it desirable to change the title of the book before the appearance of the next edition.—R.C.K.

A Forward Look at the Pharmaceutical Sciences

HARRISON MEMORIAL LECTURE, 1965

DELIBERATELY taking a broad canvas, and drawing on his personal experience to sketch it in, MR. A. G. FISHBURN, F.P.S., chose "The Future of the Pharmaceutical Sciences" as the subject for his address as recipient of the Harrison Memorial award, 1965. Mr. Fishburn has been since 1943 manager of the pharmaceutical chemistry branch of Imperial Chemical Industries, Ltd., in which capacity he has had years of close concern with both the technical and personnel problems of running such a department, after earlier experience as a teacher of pharmacy. His lecture was given at the headquarters of the Pharmaceutical Society in London on December 1, when he received the award at the hands of the president (Mr. J. C. Bloomfield).

Risk of Being Overtaken

Mr. Fishburn said that the traditional high standards of such a profession as pharmacy could exert a beneficial influence on the future, but there was a danger of being overtaken by events if one looked backwards too often. Already pharmacy had on occasion been found unprepared to cope with the special properties of new drugs of unusual type. It was not that pharmacists were in any sense negligent, but simply that they were faced with problems for which their basic training and subsequent professional experience were not adequate. Pharmacy must not merely keep pace with other streams of drug research; it must also try to anticipate the lines on which they would develop. He intended, therefore, to try to answer the following questions: What problems face, or are likely to face, the pharmacist as a scientific worker?; what is the present status of training in the pharmaceutical sciences?; and to what extent is better co-ordination desirable between academic work and industrial or professional needs?

In speaking of the pharmacist as a scientific worker, he was thinking of the main areas of professional responsibility: to ensure that drugs are supplied in safe, effective and convenient forms. He was less concerned with pharmacists who had chosen to work in related fields, but would later refer to problems such migratory trends might create.

One of the most significant features of the pharmacist's contribution to new drug development was that much of his work must be carried out in an atmosphere of urgency; it seemed likely that that would become even more noticeable in the future. Work must be well planned from the outset; and must bring results as rapidly as possible, using aids such as accelerated tests and statistically designed experiments, while simultaneously avoiding the temptation to "cut corners" or to make optimistic assumptions. It must also be recorded clearly, since the submission of experimental data to a health authority was now a prerequisite not only of sale but also of clinical trial. Further, the product eventually offered for sale

should not depart significantly from that submitted to trial, which meant that the clinical trial period could not be used as an extension of time for "second thoughts" on formulation. That, together with the fact that clinical trials were for several reasons becoming increasingly difficult to arrange, put the pharmacist under considerable pressure, and his chances of success were largely dependent on ready availability of the appropriate research tools. The development of a formulated product might reveal a problem warranting independent and longer-term research. Obviously, it was highly inconvenient if the progress of a discovery had to be halted while additional and unexpected programmes of work were arranged; attempts were therefore being made to create a foundation or background of knowledge that would serve to anticipate some of the needs of future product development. That had led to a subdivision of industrial pharmaceutical research into short and long-term projects, the former concerned with the development of specific products and the latter with extending the fields of pharmaceutical technology and biopharmaceutics. Mr. Fishburn gave examples to illustrate the types of problem encountered.

Short-term Projects

The majority of new drugs reached the pharmacist with few background data, for example on solubility in the solvents commonly used in formulation: on sensitivity to heat, light, moisture and pH changes; on liability to mould or bacterial growth and on likely incompatibility with the usual excipients. It was necessary to fill some of those gaps and simultaneously to obtain answers to other technical or technocommercial questions such as the type of patient (particularly for veterinary medicines), routes of administration and dosage *régime*, the existence of competitive products, the expected territories of sale and desired shelf life in them, and the probable scale and location of manufacture. Those provided the initial framework for the investigation, and the challenge was to provide rapidly a range of stable and attractive prototypes, preferably with some degree of novelty and invention. To approach such a project with the outlook of a dispenser asked to make a stock mixture would clearly lead to disaster, and the importance of speculative thought and research planning could not be over-emphasised.

Planning must take into account the need for precise and specific analytical methods and for deciding on suitable standards of quality which, apart from control of routine manufacture, were used, for example, in stability studies and for solving various problems that might arise during the preparation of the drug itself. Mr. Fishburn quoted an example from his experience in which, if the analytical laboratory had not been alerted to a change in the solid-state infrared

spectrum of a corticosteroid when isolated from two different solvents and had thought of its possible implications, a switch would have been made to a product that underwent 50 per cent. breakdown in *three weeks*.

Long-term Projects

Research in pharmaceutical technology might be stimulated in various ways. It was essential to keep abreast both of technological advances in pharmacy throughout the world and with those in allied fields. Research in biopharmaceutics was relatively new; it was known that formulation could have a greater influence on drug absorption than had previously been realised, but the underlying mechanisms was not always understood. The effect of changing the physical form of highly insoluble drugs, administered orally, had been explored fairly thoroughly, and in some cases had reached the stage of pharmacopoeial standards for particle size or specific surface area. A more recent, but in some ways comparable, study was that of varying the salt or derivative of a soluble drug in order to control absorption. One method of studying those effects *in vitro* was by comparing the rate of diffusion from one aqueous medium to another *via* an intermediate non-aqueous layer. By adjusting the pH of the separate aqueous layers, and by the use of buffer salts and other additives, the system could simulate the absorption of orally administered drugs into the blood stream, and absorption curves could be derived and compared with data from corresponding animal studies. That type of investigation would provide useful leads, either for improved absorption or for "slow-release" therapy; already it was appreciated that salts of potent bases should not be changed indiscriminately during the development of dosage forms.

Essentials of the pharmacist as a scientific worker were thus an adequate understanding of the chemical and physical properties of drugs and of their behaviour; a speculative and inventive approach to problems of product development; and the ability to plan, execute and record a short- and long-term investigational programme.

Training System

Speaking of the present pattern of education in pharmacy, Mr. Fishburn said that an important requirement was that the basic training should be suitable for entrants into retail pharmacy, who were numerically the most important. Alternative schemes for a direct route to an independent "scientific" training had been considered but had so far proved impracticable, mainly because the number of candidates would be small and even they would wish to be eligible for the Society's register. The existing scheme was basically sound, and indeed it was necessary that those who were to be concerned with product development should be

familiar with the methods of retail practice. But extemporaneous pharmacy tended to narrow the student's conception of his professional responsibilities, causing him later to find difficulty in adopting an authoritative attitude when required to devise a product on his own initiative. Considering subject-matter as opposed to the general outlook, he suggested some aspects of training that might be accentuated and others that were perhaps better learned as part of professional experience. Accepting that the majority of new drugs were likely to be produced by chemical or biochemical syntheses, and might well become progressively more complex and potent, the dominating position of chemistry was obvious. Within chemistry itself, physical chemistry had a special relevance to formulation studies, and a suitable level of mathematics was therefore desirable. He was no advocate of the elaborate physico-chemical approaches to drug absorption, strongly weighted with mathematics, that were sometimes published as pharmaceutical studies, but was emphasising that the pharmacist must understand fully the properties and behaviour of his materials. The increasing importance of veterinary medicine should next be recognised and some reference to it included at the teaching stage. Much to be learned of the prophylactic and therapeutic treatment of animals was relevant to pharmacy.

In suggesting that some aspects of training might be postponed until the period of professional experience, he had in mind the possible danger of producing technicians rather than scientists. The original qualifying examinations had presupposed almost equal periods of academic and professional training and, in the absence of a pre-examination pupillage, there might now be a tendency to absorb too much into the academic side instead of altering the examination syllabus. At one time, for example, great stress had been laid on methods of extracting vegetable drugs, the underlying principles of which were fairly simple. The subject had been extended to include lectures on all kinds of purely practical problems. That had always seemed to him an unrealistic approach, partly because the information given was probably out of date, and partly because the technical details could be learned far more easily while doing the job. His impression was that the accent was now on scientific principles rather than practical details; nevertheless it would be disappointing to encounter a young graduate who could dismantle a tablet compressor but who had only a sketchy knowledge of the physical properties and behaviour of powders.

Lessons from the Industry

Perhaps some of the aids to clear thinking and planning that were now used in industry might also be introduced during academic training. Method study, for example, offered a means not only of clarifying and defining a problem, but also of creating ideas.

Aid of a rather different kind was provided by statistical considerations in the design of experiments, particularly

where, as in factorial experiments, the effect of several variables must be studied. In stability tests it was often necessary to examine the effects of heat, light, pH and other factors. The usual method, namely to study them in turn and in isolation, had the disadvantage that it demanded a large number of tests yet failed to reveal interaction between the factors. Factorial experiments could be used with any number of factors and those designs were essential where interaction of factors was likely to occur.

Coming to his third main question, that of co-ordinating academic training with industrial needs for scientific workers, Mr. Fishburn said that obviously it was in no sense a new idea, because many useful points of contact already existed; one might, however, query whether they were being used to their fullest extent and whether new relationships might not be created to mutual advantage. Perhaps one disadvantage of the present system was that the majority of contacts were intermittent and random, whereas in a rapidly changing situation, such as obtained in modern industry, some degree of continuity was desirable. In the category of intermittent contact he would include activities such as "works visits," the occasional visiting lecturer from industry, mutual attendance at conferences, industrial membership of advisory committees, one or two-week postgraduate courses with lecturers

from industry, etc. A more permanent relationship was created by the appointment of academic consultants to industry and that should be encouraged. There had also been moves of fairly senior industrial scientific workers into academic posts, and that, too, should be beneficial. The pharmacy graduate who decided to make a career in allied fields such as bacteriology, pharmacology or biochemistry rather than in pharmaceuticals, was, said Mr. Fishburn, a regrettable "brain drain" since pharmacy could ill afford to lose its more promising graduates. A critical point in time was probably the selection of a subject for a Ph.D. thesis, and it was possible that an extension of academic research facilities to embrace what he had described as "long-term projects" might divert the flow in the direction of pharmaceuticals. The extremely small number of publications in that field (particularly at the British Pharmaceutical Conference) was another disappointing feature of the present situation. Looking a little further afield into other subjects, or to pharmacy in other countries, it could be seen that another kind of academic/industrial link had been created by the appointment of an industrial scientist as a part-time member of academic staff, frequently as reader for the direction of a small research group. By thus creating an "opposite number" to the academic consultant, a two-way traffic of information might be established.

U.S. ANTIBIOTICS CONSPIRACY CHARGES

Ministry informed of verdict

THE Ministry of Health and the Association of the British Pharmaceutical Industry have been notified by Cyanamid of Great Britain, Ltd., of the verdict given by a New York Federal Court jury on December 17, when three Americans were found guilty, after a four-week trial, of conspiracy to supply to Italian companies during 1960-61 stolen micro-organisms and technical information for the manufacture of antibiotic drugs. Messrs. Cyanamid, a subsidiary of American Cyanamid Co., stated "The trial was the culmination of five years' investigation into the question of how copies of the company's Lederle antibiotics had become available in world markets, including Britain and the United States, at abnormally low prices. . . ." The British names of the antibiotics concerned were Achromycin (tetracycline), Aureomycin (chlortetracycline) and Ledermycin (demethylchlortetracycline). A *Times* report of the New York trial stated that "Two employees of the Cyanamid Co. pleaded guilty and gave evidence against the other accused . . . much of the legal argument turned on the definition of inter-State theft and how far the refined cultures of the antibiotics could be regarded as of intrinsic value. . . . The facts of the case were not in serious dispute. Dr. Sydney Fox, a chemist at Lederle, took samples of cultures of the basic materials of achromycin, declomycin, aureomycin, and aristocort and handed them over with secret extraction procedures to a representative of an Italian drug company. There is no licensing agreement between the United States and Italy, and

the Italians manufactured the drugs and sold them much more cheaply than Cyanamid, whose price takes account of many millions of dollars of research costs."

Correspondence

Still Going Strong

SIR,—In notifying you that H. S. Turner (Chemist), Ltd. have recently taken over another business, making it the fifth shop in the group, and in view of the correspondence in your columns recently, it would appear to be topical to mention that the main business in St. Ives was started by my grandfather in 1848. It has been in the possession of the family since that time, I being the third generation in the business. We were looking through some old books recently and found we have prescription books for 1856 and the complete accounts from 1875 to 1880.

P. G. TURNER,
Saint Ives, Huntingdonshire

PRESCRIPTION POSER

Capn Ambert Ethelred
17th Dec 1965

THE prescription reproduced above, not surprisingly, occasioned differences of interpretation among the pharmacists at the London Pharmacy at which it was presented.

THE MARKETS IN 1965

Prices of pharmaceutical chemicals showed greater gains than in any year for a decade. Elsewhere, although demand was quiet, prices made gains

THOUGH trading in the markets throughout 1965 was extremely quiet, prices of many commodities either held firm at previous levels or showed substantial advances. Falls did occur but they were usually associated with commodities which, in the previous year, had borne inflated prices. Buying was usually on a hand-to-mouth basis, reflecting the Government's curb on credit.

Crude Drugs

Among CRUDE DRUGS the high rates ruling for IPECACUANHA in 1964 were not maintained, and there was a gradual easing off, particularly during the second half. Prices of Jamaican GINGER reacted similarly; from 550s. per cwt. quoted for No. 3 in January the value fell each month until at the beginning of August it stood at 325s. Forward offers were then withdrawn and spot prices gradually increased to 420s. by the beginning of November before stabilising at that price for the rest of the year. The Cochin variety was unobtainable on the spot until April, whereafter parcels could be had at around 310s. per cwt. Most SPICES were quiet with supplies often difficult to obtain.

Most BALSAMS were in short supply and prices were advanced accordingly. CINCHONA BARK was almost impossible to obtain from any source at all times. BOTANICALS of American origin suffered their ups and downs. From the accompanying table it might appear that CASCARA had not changed in price but, in fact, it rose 13s. in April and was reduced after the new season's peel became available. A sudden demand in November for COCILLANA BARK found supplies short, and the price doubled itself in two weeks. WITCH HAZEL LEAVES were similarly affected, ending the year at around 3s. 6d. per lb. against 2s. 2d. in the year previous. American LOBELIA was not quoted for most of the year and when offers reappeared in October they were not competitive with Dutch material. The conflict between India and Pakistan caused some Indian commodities to rise, particularly VALERIAN and CARDAMOMS, though Tinnevely SENNA was not affected. Portuguese ERGOT moved up during the summer on forecasts of a crop failure. MENTHOL, which fell sev-

erely during 1964, recovered gradually, Brazilian material usually setting the pace. In the past Chinese menthol was usually at a premium over Brazilian, but by February both sources were quoted at about the same level so far as c.i.f. offers were concerned. Soon afterwards Brazilian prices went ahead and held the lead for the rest of the year. More frequently it was cheaper to buy spot material than forward.

In AROMATIC SEEDS little interest was shown in green ANISE. Main buying was again in China STAR because of the price being cheaper. Demand was also poor for Indian CELERY and DILL. Interest in Indian FENNEL was blunted by cheaper Chinese material. CARAWAY and FENUGREEK were in small but steady demand throughout the year. The Iranian CUMIN crop was a failure and consequently other sources were in demand, buyers having to pay shippers' prices. English MUSTARD was cheap until new crop reports confirmed that better qualities would be almost unobtainable because of weather conditions.

Essential Oils

Like the weather for most of the summer, inquiry for ESSENTIAL OILS was dull and many of the prices moved only within narrow limits. Chinese ANISE was available in December at 9s. 3d. per lb., against 10s. 6d. in 1964, while BOIS DE ROSE was quoted at 16s. 4½d. (against 18s. 3d.) and EUCALYPTUS 70-75 per cent. at 5s. 9d.

Essential oils (per lb.)	Dec. 1964	Dec. 1965
Anise	s. d. 10 6	s. d. 9 3
Bois de rose	18 3	16 4½
Citronella, Ceylon	5 9	4 7½
Formosan	5 6	4 3*
Eucalyptus 70-75	7 0	5 9
Lemongrass	9 0	13 0†
Patchouli	44 0	102 6†
Peppermint, Chinese	7 6	12 3
Brazilian	7 3	13 6
American	35 0	49 0
Sandalwood, Mysore	106 6	108 0

* in bond. † nominal.

(7s. 6d.). Ceylon CITRONELE steadily declined from 6s. 6d. per lb. to 4s. 7½d. and Formosan (in bond) from 5s. 6d. to 4s. 3d. On the other hand LEMONGRASS, starting at 9s., see-sawed until the end of July before establishing a definitely firmer tone. In December it had risen to over 13s., with little material available for shipment. All the MINT oils were considerably firmer. Chinese PEPPERMINT rising from 7s. 6d. to 12s. 3d. and Brazilian from 7s. 3d. to 13s. 6d. Despite a bigger crop American oil, against predictions, continued its dearer trend after the crop was collected. Reasons given for the firm position were (1) holding out for more profit, (2) larger demand and (3) sympathy with SPEARMINT, which was in short supply. The latter oil, quoted at 65s. upwards in December, was just 100 per cent. above the value a year

ago. BERGAMOT rose to 170s. per lb. (from under 100s.); drought and heat in Sicily during the summer caused the fruits to drop off the trees so that only a poor harvest was collected. PATCHOULI was another oil that made steep gains because of the Indonesian situation.

Pharmaceutical Chemicals

So far as PHARMACEUTICAL CHEMICALS were concerned the market saw more price rises during the year than in any previous since the Korean war. Some of the major advances were due to metal prices being dearer. For instance, MERCURY went up from the record figure of £150 per flask of 76 lb. to £265. After mid-September there were three reduc-

Pharmaceutical Chemicals		Dec. 1964	Dec. 1965
Aneurine hcl.	per kilo	s. d. 126 0	s. d. 118 6
Aspirin	lb.	4 0½	4 0½
Bismuth carb.	kilo	50 6	77 10
Calomel	kilo	105 0	146 0
Citric acid	cwt.	224 0	214 0
Cream of tartar	cwt.	241 0	241 0
Cyanocobalamin	gm.	63 0	52 6
Glycerin	cwt.	185 0	195 0
Nicotinic acid	kilo	30 0	32 0
Potass. bromide	kilo	5 4	5 8
Potass. citrate	kilo	5 7	5 7
Potass. iodide	kilo	21 6	21 6
Prednisolone alc.	gm.	7 6	7 0
Pyridoxine	kilo	707 6	450 0
Quinine sulph.	oz.	4 9½	16 5†
Riboflavine	kilo	217 6	217 6
Sodium salicylate	lb.	3 9	3 11
Zinc oxide	cwt.	131 6	131 6

† nominal.

tions which brought the price down to £200 per flask. As an example of the effect on MERCURIALS, CALOMEL went up from 105s. per kilo to 190s. before falling back to 146s. BISMUTH METAL rose from 17s. to 22s. per lb. in March and to 28s. 6d. at the end of June.

Unlike previous years, 1965 was a remarkably stable year for ZINC and the OXIDE was unchanged in 1965. QUININE and QUINIDINE also showed phenomenal price gains. For most of the time quotations were nominal as there were only small lots available to meet regular customers' contracts. Their rates went up in March. June and September, and as an example QUININE SULPHATE, B.P., rose from 4s. 9½d. per oz. to 16s. 5d. Several other alkaloids and salts were firm, among them EPHEDRINE and PHYSOSTIGMINE. While BRUCINE was dearer, STRYCHNINE declined. BROMIDES went up in January, their first move for three years, and in November GLYCERIN rose by a minimum of £10 per ton.

The few items to show net reductions on the year were mostly confined to VITAMINS. ANEURINE and VITAMIN A came down in October. ASCORBIC ACID in November. MENAPHTHONE in August. PYRIDOXINE, in three moves over the year, was reduced from 707s. 6d. per kilo to 450s. NICOTINIC ACID and NICOTINAMIDE, however, moved against the trend and were increased in June.

Crude Drugs		Dec. 1964	Dec. 1965
Aloes, Cape	per cwt.	s. d. 260 0	s. d. 265 0
Cardamoms	lb.	24 0	32 6†
Cascara	cwt.	225 0	225 0
Cochineal			
Peruvian	lb.	16 0	15 0
Ginger			
No. 3 Jamaican	cwt.	560 0	420 0
Ipecacuanha (c.i.f.)			
Colombian	lb.	66 0	54 0
Menthol (in bulk)			
Chinese	lb.	23 0	30 0
Brazilian	lb.	20 6	32 6
Mercury	76-lb.	2,700 0	4,000 0
Senega	lb.	19 6	20 6

† nominal.

WORLD TRADE

Big Italian Merger Talks.—one of the largest companies in the world would be formed if a proposed merger of two of the largest Italian companies—Montecatini, S.p.A., and Soc. Edison, p.A., takes place. The two companies are believed to account for most of the Italian chemical industry.

Japanese Sulphur Buying Mission.—The Japanese Ministry of Trade plans to send a survey mission to the United States, Canada, and Mexico shortly to explore the possibility of buying sulphur on a long-term basis as part of the Ministry's programme of building sulphuric acid factories using imported sulphur or ores to cover local shortages of the acid.

Pharmaceuticals in Mexico.—Mexico's pharmaceutical industry is reported to be now supplying about 95 per cent. of all pharmaceutical products consumed locally and that it will shortly be able to export. It is estimated that the value of pharmaceuticals produced in 1965 will reach 2,500 million pesos (£71 millions) and that new investments of 2,000 million pesos will shortly be made in the industry.

Russia Buys Plant in Italy.—The Montecatini Co. has signed a preliminary agreement to supply the Soviet Union with six or more industrial plants valued at over 70,000 million lire. The company president (Count Carlo Faina), on his return from Moscow recently, declined to disclose details, as it was still a preliminary agreement. He said the agreement set out engineering activity for five years, putting in train scientific research collaboration between Montecatini and the Soviet Union. The problem of patents would be discussed more fully later.

WILLS

MR. N. ARMITAGE, M.P.S., 8 Leeds Road, Hipperholme, Halifax, left £4,032 (£3,698 net).

MR. T. L. BAILEY, Hillcrest, Dalesthorpe Road, Skegby, Notts, who qualified as a chemist and druggist in 1914, left £48,594 (£35,960 net).

MR. A. R. BAKER, M.P.S., Brookhurst, Upper Morin Road, Paignton, Devon, left £7,626 (£7,487 net).

MR. L. H. BANKS, M.P.S., 31 High Street, Wincanton, Somerset, left £11,429 (£1,042 net).

MR. F. BARNARD, M.P.S., 43 Vancouver Avenue, King's Lynn, Norfolk, left £3,930 (£3,864 net).

MR. H. BLANO, F.P.S., 26 Essex Park, London, N.3, left £27,907 (£27,800 net).

MR. G. BROWN, M.P.S., Hawthorn Cottage, The Gardens, Sandbach, Ches, left £9,858 (£9,758 net).

MR. J. R. BURDON, M.P.S., 12 Abbeygate Street, Bury St. Edmunds, Suffolk, left £9,091 (£9,013 net).

MR. D. G. CHANCE, M.P.S., 13 Chestnut Avenue, Dudley, Worcs, left £3,146 (£3,094 net).

MR. N. C. CHESTER, M.P.S., 18 Peteril Street, Carlisle, Cumberland, left £28,087 (£28,019 net).

MR. G. COFMAN, M.P.S., 40 Culmington Road, London, W.13, left £8,136 (£7,997 net).

MR. W. H. COOPER, M.P.S., 54 Roman Road, Fallowfield, Manchester, left £36,371 (£36,243 net).

MISS D. DRAPER, 19 Townsville Road, Moor-down, Bournemouth, Hants, who qualified as a chemist and druggist in 1917, left £9,714 (£9,656 net).

MR. A. H. FENNALL, M.P.S., 13 Hillmount Avenue, Heysham, Morecambe, Lancs, left £7,698 (£7,617 net).

MR. C. W. FRYER, M.P.S., 41 Victoria Avenue, Bloxwich, Walsall, Staffs, left £8,609 (£6,901 net).

TRADE MARKS

APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," December 8

For non-medicated toilet preparations, all sold in containers adapted to disperse their contents in aerosol form (3)

TALENTO, 868,654, by Domestic Fillers, Ltd., Hayes, Middlesex.

For non-medicated toilet preparations, cosmetic preparations and soaps, all being goods for sale in the United Kingdom and for export to the Republic of Ireland and the Channel Islands (3)

POND'S FRESH START, 871,711, by Chesebrough-Pond's, Ltd., London, N.W.10.

For soaps, non-medicated toilet preparations, perfumes, hair lotions, essential oils and dentifrices (3)

Device with words PRET A PORTER READY TO WEAR, B872,278, by Maria Chenu, Neuilly-sur-Seine, France.

For non-medicated toilet preparations, cosmetic preparations, perfumes and soap (3)

HARDY AMIES, B872,613, by Hardy Amies, Ltd., London, W.1.

For cosmetic preparations, preparations for setting the hair and non-medicated toilet preparations (none being for the hair) (3)

PRINSET, B877,205, by Organon Laboratories, Ltd., Morden, Surrey.

For perfumed soap, perfumes, non-medicated toilet preparations, cosmetics, hair lotions and dentifrices (3)

Device with words GLAMOUR BOURJOIS, 875,264, by Bourjois, Ltd., Croydon, Surrey.

For soaps, non-medicated toilet preparations and perfumes (3)

GERARD HEALTHGUARD, 880,748, by Gerard Brothers, Ltd., Nottingham.

For cosmetics, non-medicated toilet preparations, perfumes, and preparations for the hair, but not including soap or any goods of the same description as soap (3)

ILLUMINA, 881,792, by Beauty Counselors of London, Ltd., Newhaven, Sussex.

For preparations for the hair, cosmetics, perfumes, soaps and non-medicated bath preparations (3)

Device with word RYF, B882,006, by Albert Ryf, Lucerne, Switzerland.

For cosmetic powder compacts incorporating a lipstick (3)

COTY TWIN SET, 882,084, by Coty (England), Ltd., London, W.1.

For soaps, perfumes, cosmetics and hair lotions (3)

TOWNSMAN, 883,590, by Colet Products, Ltd., Dublin, 1, Eire.

For non-medicated toilet preparations and cosmetic preparations (3)

LOCKVOX, 884,004, by Erik Vejborg, Copenhagen K, Denmark.

For pharmaceutical preparations and substances (5)

Device with letters and word SE TONES, 871,074, by Maxim Pharmaceuticals, Westcliff-on-Sea, Essex. PANAVESOL, 876,613, by Sterwin, A.G., Zug, Switzerland. PURAPEN, 882,745, by Beecham Research Laboratories, Brentford, Middlesex.

For disinfectants for domestic use (5)

NURSAN, 872,162, by Hadleigh-Crowther, Ltd., Reading, Berks.

For medicated preparations for use by spraying (5)

MEDISOL, 872,952, by Charles Alexander & Co., Ltd., West Molesey, Surrey.

For neuroleptic pharmaceutical preparations for use in psychiatry (5)

TRIPERIDOL, 874,465, by Janssen Pharmaceutica, N.V., Beerse, Belgium.

For deodorant and anti-perspirant preparations, all for use by spraying; pads, cloths and tissues, all impregnated with deodorant and anti-perspirant preparations; all for personal female use (5)

FEMFRESH, B874,546, by Green, Young & Co., Ltd., London, W.1.

For pharmaceutical preparations and substances for human and veterinary use (5)

ESOMIL, 875,332, by CIBA, Ltd., Basle, Switzerland.

For disinfectants, sterilising compounds and preparations for sterilising surgical instruments (5)

PRIMASEPT, 877,031, by Schulke & Mayr, G.m.b.H., Glashutte/Holstein, Germany.

PATENTS

COMPLETE SPECIFICATIONS ACCEPTED

From the "Official Journal (Patents),"

November 17

Cyclohexylamine sulphamic acid salts. Abbott Laboratories, 1,015,107.

Production of purification of polypropylene. W. R. Grace & Co. 1,015,108.

Device for the inducement of natural sleep. H. W. Butland, 1,015,114.

Chemical filtering apparatus. R. L. Dannley, 1,015,137.

Photographic copying apparatus. Eastman Kodak Co. 1,015,141-2.

Device for protecting plants from slugs and snails. E. Bacon, 1,015,200.

Cervical collar. S. H. Camp & Co. 1,015,207.

Cholesterol derivatives and preparations thereof. E. Merck, A.G. 1,015,214.

Preparation of 3 β -hydroxy 20-oxo-18-nor-5 α -13 (17)-pregnene. Shionogi & Co., Ltd. 1,015,216.

6-dialkylamino-4-pregnene-3,20-diones and the preparation thereof. Shionogi & Co., Ltd. 1,015,218.

Catalytic hydrogenation of unsaturated ketones. Scholven-Chemie, A.G. 1,015,219.

Dry shavers. J. Bruecker, 1,015,232.

Photographic cameras. Eastman Kodak Co. 1,015,243-44.

Emulsified pesticidal preparation. Philips' Gloeilampen-Fabriek, N.V. 1,015,247.

Aqueous pharmaceutical compositions in capsule form. Glaxo Laboratories, Ltd. 1,015,251.

Method of producing a material which stimulates in moulds the production of acids of the krebs cycle. Ceskoslovenska Akademie, Ved. 1,015,252.

Wax compositions. Union Carbide Corporation, 1,015,260.

Compositions based on short chain substituted fatty acid amides and on amine complexes thereof, and exhibiting activity against micro-organisms. Dutton and Reinisch, Ltd. 1,015,261.

Virus culture. National Research Development Corporation, 1,015,262.

Dextran compounds, method and compositions. Pharmacia, A.B. 1,015,279.

Preparation of collagenous materials. Ethicon, Inc. 1,015,284.

Separation of mixtures of fats and of fatty acids. Chemetron Corporation, 1,015,354.

Separation of gases. Siemens-Schuckertwerke, A.G. 1,015,355.

Device for nebulizing powders. V. Ghisolfi, 1,015,361.

Environmental control system. E. J. Kump, 1,015,374.

Steroid compounds. Merck & Co., Inc. 1,015,396.

Penicillins. Bristol-Myers Co. 1,015,399.

Salicylamide derivatives. J. A. Faust & M. Sahyur, 1,015,403.

Anovexogenic compositions. Karl Thomae, G.m.b.H. 1,015,407.

Process for continuous production of δ -valerolactone. Asahi Kasei Kogyo Kabushiki Kaisha, 1,015,409.

Process of producing 2-amino alkanol esters of sulphuric acid. Chemirad Corporation, 1,015,424.

Apparatus for carrying out chemical reactions. Hans J. Zimmerverfahrenstechnik, 1,015,474.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from December 31.

PRINT AND PUBLICITY

PUBLICATIONS

Booklets and Leaflets

ARMOUR HESS CHEMICALS, LTD., Westgate, Leeds, 1: "Armorslip slip agents for polyolefins" (6-p. booklet). "Armowax EBS" (7-p. booklet).

DISTILLERS CO., LTD., Chemicals and Plastics Group, Devonshire House, Mayfair Place, London, W.1: "Bisol Technigram on formic acid" (four leaflets).

JOHNSON, MATTHEY & CO., LTD., Hatton Garden, London, E.C.1: "Platinum metal catalysts" (20-p. booklet).

News-sheets

LAMBERT CHEMICAL CO., LTD., Chestnut Avenue, Eastleigh, Hants: Polynews Christmas edition.

NEW COMPANIES

P.C.—Private Company, R.O.—Registered Office

M. M. CHISELL & SONS, LTD. (P.C.).—Capital £100. To carry on the business of chemists, pharmacists, druggists, etc. Directors: Maxwell M. Chisell, M.P.S., and Elsie Chisell, R.O.: 87 Lord Street, Liverpool, 2.

G. & E. CURRIE, LTD. (P.C.).—Capital £100. To carry on the business of manufacturing, designing and wholesale and retail chemists, etc. Directors: Gerard Currie, M.P.S., and Elizabeth Currie, 19 York Parade, Tonbridge.

MCCLURE, YOUNG & CO. (EXPORT), LTD. (P.C.).—Capital £100. To carry on the business of chemists, druggists, etc. Subscribers: Shirley Hart and Averill Hart, R.O.: Standard Road, London, N.W.10.

MCCLURE, YOUNG & CO. (SALES), LTD. (P.C.).—Capital £100. Other details similar to McClure, Young & Co. (Export), Ltd.

MCCLURE, YOUNG & CO. (WHOLESALE),

LTD. (P.C.).—Capital £100. To carry on the business of wholesale chemists, etc. Other details similar to McClure, Young & Co. (Export), Ltd.

SCIENTIFIC & MEDICAL SUPPLIES, LTD. (P.C.).—Capital £100. Directors: Reginald J. Morse and Grace Morse, R.O.: 219 London Road, Camberley, Surrey.

P. B. SIMS & CO., LTD. (P.C.).—Capital £1,000. To carry on the business of wholesalers, retailers, and representatives in all chemists' sundries, etc. Directors: Peter B. Sims, Frank A. Dennis and James E. Burt, R.O.: 61 Lisson Street, London, N.W.1.

STANLEY HOME PRODUCTS (U.K.), LTD. (P.C.).—Capital £100. To carry on the business of manufacturers of and dealers in pharmaceutical preparations, and toiletry sundries, etc. Subscribers: Robert S. Aird and Jeremy Grice, 12 Whitehall, London, S.W.1.

CONTEMPORARY THEMES

Subjects of contributions in current medical and technical periodicals.

HOSPITAL PHARMACY PERSONNEL. Current trends in the utilization of. *Amer. J. hosp. Pharm.*, November, p. 596.

A PARENTERAL CONTRAST MEDIUM. The emulsification and evaluation of, for lymphography. *Amer. J. hosp. Pharm.*, November, p. 606.

EXPERIMENTAL HYPOVITAMINOSIS-A in calves. *Vet. Rec.*, December 18, p. 1532.

A FAMILY PRESCRIPTION RECORD KEEPING SYSTEM. *Canad. Pharm. J.*, November, p. 5.

F 30385—A new antischistosomal drug. Experimental studies on. *Acta Pharmaceutica Sinica*, October, p. 649. (English abstract only.)

ANTIVIRAL COMPOUNDS. Studies on. The synthesis of acetophenone derivatives. *Acta Pharmaceutica Sinica*, October, p. 671. (English abstract only.)

GLUCAGON SECRETION. Stimulation of, by oral glucose. *Lancet*, December 18, p. 1257.

ADRENERGIC B-BLOCKADE. Effect of on Parkinsonian tremor. *Lancet*, December 18, p. 1259.

MORPHINE AND PETHIDINE. A comparison on the sedative and toxic effects of. *Lancet*, December 18, p. 1262.

LOW-MOLECULAR-WEIGHT DEXTRAN in treatment of bone-pain crises in sickle-cell disease. *Lancet*, December 18, p. 1271.

WATER HEMLOCK POISONING. *Lancet*, December 18, p. 1274.

VITAMIN B. Absorption of, in the rat. *Lancet*, December 18, p. 1277.

NATULAN (PROCARBAZINE) combined with radiotherapy in management of inoperable malignant melanoma. *Brit. med. J.*, December 18, p. 1473.

PHENINDIONE. Sensitivity reaction to, with urticaria, hepatitis, and pancytopenia. *Brit. med. J.*, December 18, p. 1475.

2-TRIFLUOROMETHYLBENZIMIDAZOLES: a new class of herbicidal compounds. *Nature*, December 18, p. 1166.

THALIDOMIDE as a possible biological acylating agent. *Nature*, December 18, p. 1208.

1,7-DIAMINO-8-NAPHTHOL-3,6-DISULPHONIC ACID. Teratogenic effects of synthetic compounds related to trypan blue: the effect of 1,7-diamino-8-naphthol-3,6-disulphonic acid on pregnancy in the rat. *Nature*, December 18, p. 1219.

AZOTOBACTER. Differences in the antigenic pattern of, grown on different nitrogen sources. *Nature*, December 18, p. 1235.

SOLUBILIZED SYSTEMS in pharmacy. *J. pharm. Sciences*, September, p. 1229.

INSECT CHEMISTRY. Some aspects of. *J. pharm. Sciences*, October, p. 1395.

RELEASE OF A DRUG from a dosage form. *J. pharm. Sciences*, October, p. 1453.

STABILITY OF OIL-IN-WATER EMULSIONS. *J. pharm. Sciences*, November, p. 1557.



Prescribers' Press

What doctors are reading about developments in drugs and treatments

PROPRANOLOL and pronethalol, both β -adrenergic blocking agents, have each been shown in experimental studies to prevent the increase in tremor normally observed after injection of adrenaline in patients with Parkinson's disease. Experiments carried out at St. Thomas's Hospital, London, also indicated that both drugs reduce spontaneous tremor, but patient response varied considerably and in no case was tremor abolished. In a double-blind cross-over trial in sixteen patients, 30 mgm. of propranolol three times daily gave statistically better results than a placebo in the relief of Parkinsonian tremor. (*Lancet*, December 18, p. 1259.)

COMPARISON of the effects of 100 mgm. of pethidine with those of 10 mgm. of morphine in premedication has shown that, though both have similar sedative effects, pre-operative nau-

sea, vomiting and dizziness are more common after pethidine. A report from Queen's University, Belfast, shows that the emetic effects of pethidine are reduced by the addition of atropine. In a further study, without the complications of anaesthesia and surgery, pethidine was found to be followed by a high incidence of nausea and vomiting of short duration, whereas morphine produced sickness at a later stage which lasted for at least four hours. (*Lancet*, December 18, p. 1262.)

REPORTS supporting the contention that procabazine (Natulan) sensitises tumour tissue to damaging effects from ionising radiations are submitted by South African workers. Of ten cases of inoperable malignant melanoma treated with combined procabazine and radiotherapy, six showed objective improvement. (*B.M.J.*, December 18, p. 1473.)

COMMERCIAL TELEVISION

The information given in the table is of number of appearances and total screen time in seconds. Thus 7/105 means that the advertiser's announcement will, during the week covered, be screened seven times and for a total of 105 seconds.

Period January 2—8				West													
				London	Midland	North	Scotland	Wales & West	South	North-east	Anglia	Ulster	Westward	Border	Grampian	Eireann	Channel Is.
PRODUCT																	
Anadin	...	...	...	8/115	7/164	7/118	3/100	5/81	3/90	5/81	9/142	4/120	—	2/60	5/58	—	—
Aspro	...	...	...	8/215	8/215	8/215	8/215	10/282	8/215	8/215	10/282	—	10/282	10/282	10/282	—	10/282
Askit powders	...	...	...	—	—	—	7/49	—	—	—	—	—	—	3/21	3/21	—	—
Bisodol	...	...	...	7/35	3/21	4/28	5/35	5/35	6/42	5/35	6/42	—	—	5/25	5/35	—	—
Buttercup syrup	...	...	...	—	—	3/45	—	—	—	3/45	—	—	—	3/45	—	—	—
Contact 400	...	...	...	4/120	4/120	5/150	2/60	4/120	8/240	3/90	3/90	3/90	3/90	2/60	2/60	—	3/90
Deep Heat	...	...	...	7/210	6/180	7/210	—	6/180	6/180	7/210	6/180	7/210	7/210	7/210	7/210	—	—
Disprin	...	...	...	2/45	2/45	3/75	4/90	2/45	5/105	4/75	4/75	3/60	4/75	4/90	3/75	—	2/45
Gillette Super Silver blades	...	...	...	3/45	3/45	3/45	3/45	3/45	3/45	3/45	3/45	3/45	3/45	3/45	3/45	—	—
Loxene shampoo	...	...	...	2/60	2/60	2/60	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	—	—
Mac throat sweets	...	...	...	2/60	2/60	—	—	—	3/90	—	—	—	—	—	—	—	—
Megezones	...	...	...	—	—	—	—	—	—	2/60	—	—	—	—	—	—	—
Moorland indigestion tablets	...	...	...	—	—	1/7	—	—	—	—	—	—	—	—	—	—	—
Nair	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—	3/90	—
Nulon	...	...	...	—	2/60	2/60	1/30	1/30	2/60	2/60	2/60	3/90	2/60	1/30	2/60	—	1/30
Penetrol	...	...	...	1/15	1/7	1/7	1/7	1/7	—	1/7	1/15	—	—	—	—	—	—
Steradent	...	...	...	1/30	1/30	—	1/30	—	—	1/30	2/60	1/30	1/30	1/30	2/60	—	1/30
Woodward's gripe water	...	...	...	—	—	—	—	—	—	—	—	1/15	—	—	—	—	—

cumulative price changes

AMENDING C & D QUARTERLY PRICE LIST FOR DECEMBER 1965

Dimetion (292 C) tablets										Branchilator (97 Bayer)TS7										Davenol (1352 Wyeth)TS7									
mdreson (917 Organon)TS										measured dose nebuliser										linctus									
tablets 5mgm 100 12 0ea — 18 0										12.5mils 14 0ea — 21 0										4oz 41 9 — 4 8									
500 53 0ea — 79 6										12 6ea — 18 9										40oz 30 0ea — 40 0									
25mgm 100 48 0ea — 72 0										refill 12 6ea — 18 9										Daxaids (1262 UL)									
500 225 0ea — 337 6										D Brontan (107 BH&L)										Daxaids (1552 UL)									
lupent (IS4 B)										Brylcreem (105 BTD)										Delta-Cortef (1263 Upjohn)TS									
(distributors 501 Geigy)										gift dispenser \$5 11 13 11½ 7 6										tablets 5mgm 100 15 0ea — —									
tablets 20mgm										refill 210cc 33 6 8 4½ 4 6										500 67 6ea — —									
1000 186 8ea — 280 0										Butazolidin (501 Geigy)										Delta-Genacort (1530 Fisons)TS									
mmident (1178 Stafford)										tablets 200mgm 20										tablets 1mgm 100 54 0 — 6 9									
toothpaste 41gm 15 9 4 0 2 1										Calgon (26 A&W)										500 18 9ea — 28 1									
75gm 22 9 5 8 3 0										descaler sachet										5mgm 20 60 0 — 7 6									
tooth powder										4oz 22 6 — 2 6										100 15 0ea — 22 6									
42gm 12 0 3 0 1 9										Carbon tetrachloride (649 ICI) capsules 1.0mil										500 67 6ea — 101 3									
100gm 17 9 4 5 2 7										Carovit (292 C) tablets										Dentu-Creme (1179 Stafford)									
murol (1492 Baum)										Casaque (Jean d'Albret (1145 Sirex)										large 20 7 5 1½ 3 0									
sugarless fruit drops										eau de cologne spray — 46 0										Depot-Glucormin (452 FBA)									
30 0 4 6 3 9										Charm (1327 WSL)										ampoules 40 bu 25									
nanase (117 BPL)										hairpins Polypak 41 0 10 3 6										Depot-Procafin (452 FBA)									
tablets 48 30 0ea 7 6ea 37 6										(1 gross) (1 gross)										ampoules 5mils S									
ndre Philippe (48 AP)										D Cleer (1262 UL)										D Di-Adreson (917 Organon)TS									
hand cream 3½oz 5 11 4 2 10 1 11										D Cleer (1552 UL)										tablets 1mgm 100 54 0 — 6 9									
Softaire sachet 7										D Collobell (107 BH&L)										500 18 9ea — 28 1½									
nsun (50 APL)										D Color & Style (597 HCL)										5mgm 100 15 0ea — 22 6									
chilblain paint 12 0 3 0 1 9										D Compactoid (339 CG)										500 67 6ea — 101 3									
ntiphlogistine (369 DL)										first aid outfit										D Di-Adreson-F (917 Organon)TS									
poultice 5oz 23 2 6 0 3 4½										motorists A45 68 0 — 7 6										tablets 1mgm 100 54 0 — 6 9									
10½oz 38 0 9 6 5 6½										tropical A99 69 8ea — 93 0										500 18 9ea — 28 1½									
16oz 59 6 15 0 8 8										Compound 'W' (655 ICC)										5mgm 100 15 0ea — 22 6									
dp 2lb 93 10 — —										wart remover 18 11 4 9 2 6										500 67 6ea — 101 3									
dp 5lb 16 9ea — —										Condy's (1457 PP Ltd.)										D Dienoestrol (179 BDH)									
nzora (47 Anestan)										fluid 8oz										tablets 0.3mgm 1000									
foam after shave 54 6 13 7½ 7 9										Coopaphene (295 CM&R) existing entry										D Diltron (1262 UL)									
pex (975 PD5)										liquid drench 1qt 20 7½ea — 27 6										D Diltron (1552 UL)									
bergamot conditioner										1gal 75 0ea — 100 0										D Dimol (376 Dimol) existing entry									
2½oz 41 0 10 3 5 11										Coprosol (397 Dunster)										D Dimol (376 Dimol)									
1oz 62 0 15 6 9 0										drops 25mils										(distributors 49 AF)									
Pre-Strate 2½oz 62 0 15 6 9 0										Corega (1178 Stafford)										tablets B 48 29 6 7 4½ 4 2									
cream press 2oz 80 0 20 0 14 6										denture powder										A or B 100 44 6 11 1½ 6 2									
conditioner "S"										49gm 28 0 — 3 6										16oz 90 0 22 6 12 6									
2oz 80 0 20 0 14 6										100gm 46 0 — 5 9										D Dimotapp (1071 Robins)									
pisate (1352 Wyeth)TS4B										Cortisone (1263 Upjohn)TS										elixir 16oz 18 10ea — 28 3									
tablets 10 34 6 — 3 10										tablets 25mgm 20 11 9ea — —										tablets L.A. 100 33 5ea — —									
100 311 0 — 34 7										40 23 6ea — —										500 160 0ea — —									
rtane (746 Lederle)TS4B										suspension 10mils										D Dinky (810 Maw)									
tablets 2mgm 100 6 10ea — 10 3										Co-tabs (292 C)										feeder glass									
1000 57 2ea — 85 9										Q.11 quinidin.										360.00 16 6 — 2 1									
5mgm 100 13 8ea — 20 6										125mgm 100 274 0 — —										polythene 360.01 20 6 — 2 7									
1000 113 4ea — 170 0										250 55 9ea — —										Ecusson (Jean d'Albret (1145 Sirex)									
Atomist (49S Gardner)										100 430 0 — —										eau de cologne spray — 44 0									
perfume spray										250 88 3ea — —										Efcortelan (S18 Glaxo)									
FT/2 108 0 27 0 — —										250 132 0ea — —										D intra-articular injection vial									
urofac (340 C of GB) existing entry										Crampex (657 IL)										D ointment 2½% 50gm									
urofac (259 CM&R)TSVPO										tablets 8 20 6 5 2 3 0										Equatrate (1352 Wyeth)TS4B									
food supplement (vet.)										24 — — — —										tablets 50 77 0 — 8 7									
2A 31b 15 0ea — 20 0										Crest Naturac (1203 Surex)										250 340 0 — 37 10									
101b 42 9ea — 57 0										protectives, lubricated teat 72 0 — 3 9										E.S.T.P. (1457 PP Ltd.)									
501b 161 3ea — 215 0										(1 gross)										D powder									
101b 61 6ea — 82 0										Crystapen V (518 Glaxo)TS										D Eurax (501 Geigy) existing entry									
501b 234 4½ea — 312 6										tablets 125mgm 500 102 6ea — 153 9										I Eurax (501 Geigy)									
ain d'Or (597 HCL)										Cuckoo (453 Fecher)										lotion 60mils 36 0 — 4 6									
bubbling bath oil pottery pack 175 4 42 9 25 0										babies ear cap 56 0 S 7 7 6										120mils 63 0 — 7 10½									
ambino (453 Fecher)										menthol snuff 8 0 2 0 1 3										500mils 18 0ea — 27 0									
teething rings 3 6 — 5½										Curacho (336 Curacho)										30gm 27 0 — 3 4½									
ernels (975 PD5)										embrocation 3oz 20 0 5 0 2 9										120gm 66 0 — 8 3									
hair cream 6oz 128 0 32 0 18 0										6oz 32 9 8 3 4 6										hydrocortisone cream TS 76 0 — 9 6									
etnelan (518 Glaxo)TS										(vet.) 3oz 18 0 4 6 2 6										Euvitol (34 A&H)TS4B									
tablets 0.5mgm 30 6 10½ea — 9 2										massage cream										elixir 4oz S1 0 12 9 7 5½									
0.25mgm 500										6oz 27 0 6 9 3 9										2 litres 52 0ea 13 0ea 91 0									
etnesol (518 Glaxo)										2oz 20 0 S 0 2 9										tablets 20 52 0 13 0 7 7									
lotion spray										12oz 20 0 5 0 2 9										250 37 8ea 9 5ea 65 11									
tablets 0.25mgm 500										medicated bath salts										Famel (690 Keldon)†									
etnesol-N (518 Glaxo)										dog shampoo 3oz 24 0 — 3 0										syrup children's 6oz 39 0 — 4 6									
lotion spray										80oz 14 0ea — 18 6										I Familia (304 Costa)									
Bismutho (68 AH)										Cussons (338 Cussons)										baby food 7oz 33 0 — 3 6									
compound 22oz 25 6ea — —										Imperial Leather shampoo 19 0 4 9 2 5										Ferranacolor (1500 MM&M)									
Blue Box (810 Maw)										Cycloserine (1303 Wander)TS										cine film pre-stripped									
11 9ea 1 2ea 18 6										tablets 250mgm										8mm reversal 50ft — — 33 6									
										100 128 4ea — —										I First Aid Cases (1155 S&N)									
										500 633 4ea — —										8150 — — — 9 0									
										Cytacon (518 Glaxo)										8042 — — — 11 9									
										tablets 50mcgm 25 36 0 — 4 0										8125 — — — 16 2									
										Cytamen (518 Glaxo)										8155 — — — 18 4									
										ampoules 1mil, 250mcgm										agricultural B.1 — — — 13 5									
										6 33 0 — 3 8										B.2 — — — 21 1									

the most versatile digitalis glycoside

LANOXIN DIGOXIN

brand

TABLETS • SOLUTION • INJECTION • PÆDIATRIC ELIXIR

BURROUGHS WELLCOME & CO. (The Wellcome Foundation Ltd.) LONDON



factory	F.1	—	—	32 3	Ledercort (746 Lederle)TS	—	—	—	—	Novavon (100 BI)	—	—	—	315 0
	F.2	—	—	76 0	tablets 2mgm	30 16	4ea	—	24 6	audio-sonic vibrator	—	—	—	—
	F.3	—	—	122 0		100 47	0ea	—	70 6	Omnopon (1074 Roche)†s1DD	—	—	—	—
food hygiene	8125A	—	—	16 2		500 218	2ea	—	327 3	Tubonic ampoule syringe 30mgm/ml.	—	—	—	—
motorists holdall	8025	—	—	23 7	4mgm	30 29	6ea	—	44 3	Opilon (1278 VD)	—	—	—	—
public vehicles	8207	—	—	62 5		100 94	0ea	—	141 0	(distributors 1310 WW)	—	—	—	—
Fisherman's Friend (771 LCPL)	—	—	—	—	8mgm	500 429	10ea	—	644 9	Optabs (175 BCP)†	—	—	—	—
family linctus	19 0	4 9	2 9	—		30 50	8ea	—	76 0	Orabase (1176 Squibb)	—	—	—	—
throat and chest lozenges	9 0	2 3	1 3	—		100 161	8ea	—	242 6	paste	15gm	42 0	10 6	6 1
Folvite (746 Lederle)	—	—	—	—	Lederkyn (746 Lederle)†s4B	—	—	—	—	80gm	11.0ea	2 9ea	19 3	—
solution 15mgm/ml	—	—	—	—	suspension	2oz 7	8ea	—	11 6	Orabase (1176 Squibb)	—	—	—	—
10mils	3 4ea	—	5 0	—		16oz 54	4ea	—	81 6	powder	15gm	66 0	16 6	9 7
Form Cut (1156 FS)	—	—	—	—	tablets	24 12	6ea	—	18 9	Our Jim (1467 AP&T)	—	—	—	—
adhesive fingertip bandage	24 0	—	3 0	—		100 46	8ea	—	70 0	dog ointment	15 0	3 9	2 9	—
Formoped (969 Pfizer)	—	—	—	—		500 220	2ea	—	330 3	Oxford (107 BH&L) liniment	—	—	—	—
foot rot aerosol (vet.)	—	—	—	—	Lestreflex (347 Dalmos)	—	—	—	—	Oxymycin (1515 CD)TS	—	—	—	—
Gem (365 Demuth)	—	—	—	—	elastic diachylon bandage	—	—	—	—	tablets	16 16	8ea	—	—
(distributors 1054 R&A)	—	—	—	—	3in x 3yd	66 2	—	—	7 9	Permastrate (975 PDS)	—	—	—	—
dry shampoo aerosol	47 5	11 10	6 11	—	4in x 3yd	86 2	—	—	10 0	kit	216 0	54 0	30 0	—
Gerber (200 B&P)	—	—	—	—	Lilia (761 Lilia-White)	—	—	—	—	Petri (637 Hunter)	—	—	—	—
baby cereals 8oz	16 2	—	1 8	—	sanitary belt	14 9	1 6	1 9	—	camera Auto Rapid	—	—	715 0	—
Glumorin (452 FBA)	—	—	—	—	Limmisax (1262 UL)	—	—	—	—	case	—	—	66 3	—
dry substance 10 bu	5 20	—	—	—	Limmisax (1552 UL)	—	—	—	—	Phenovis (649 ICI)	—	—	—	—
tablets 30bu	20	—	—	—	Limmits (1262 UL)	—	—	—	—	tablets 1gm all sizes	—	—	—	—
Guerlain (548 Guerlain)	—	—	—	—	Limmits (1552 UL)	—	—	—	—	Phosferine (1082 RKO)	—	—	—	—
beaute d'un soir	—	—	—	—	Locan (394 DF)†	—	—	—	—	tonic wine ½ bott	—	—	—	—
Haemostatic Erce (292 C)	—	—	—	—	suppositories	12 36	0	9 0	5 3	24 131	6	—	7 3	—
ampoules 10mils 6	120 0	—	15 0	—	Macrodex (1497 PGBl)	—	—	—	—	bott 121	9	—	13 6	—
Halex (560 Halex)	—	—	—	—	(distributors 802 MS)	—	—	—	—	Phytoferol (179 BDH)	—	—	—	—
toothbrush Lectro-dent	—	—	—	—	solution 500mils	23 0ea	—	—	—	capsules 50mgm 500	—	—	—	—
K10 45	0ea	9 7ea	69 6	—	Maigrilene (100 BI)	—	—	—	—	Pickles (982 Pickles)	—	—	—	—
Helene Curtis (597 HCL)	—	—	—	—	algae fat reducing treatment	—	—	—	—	Liptrex	—	—	—	—
shampoo plus egg	27 0	6 9	3 11	—	super active	—	—	—	—	Pino Silvestre (529 Gorney) products	—	—	—	—
Hematrix (810 Maw)	—	—	—	—	Manoids (1467 AP&T)	—	—	—	—	P.L.F. (1467 AP&T)	—	—	—	—
suppositories	39 0	8 8	5 9	—	tablets	30 42	0	10 6	6 2	capsules	30 42	0	10 6	7 6
Heminevrin (68 AH)†s4B	—	—	—	—		70 68	0	17 0	9 11	pills	30 40	6	10 1½	5 11
tablets	25 15	8ea	3 11ea	—	Marbadal "C" (452 FBA)	—	—	—	—	Polaroid (989 Polaroid)	—	—	—	—
100 50	9ea	12 8ea	—	—	Marsanta (1085 RB)	—	—	—	—	sunglasses	131 21	10ea	3ea	33 0
1000 457	6ea	114 4ea	—	—	Marsanta (409 EH)	—	—	—	—	728 35	10ea	3ea	54 0	—
Hep (107 BH&L)	—	—	—	—	Maspo (100 BI)	—	—	—	—	Poli-grip (1178 Stafford)	—	—	—	—
Hexaphen (295 CM&R)	—	—	—	—	lilliput vibrator	—	—	—	—	denture cream	—	—	—	—
Hico (785 Macarthy)	—	—	—	—	de luxe	—	—	—	—	49gm	31 4	—	3 11	—
Hico (792 M&GG)	—	—	—	—	accessories	—	—	—	—	Kapsals	30 62	0	—	7 9
Honey Pine (785 Macarthy)	—	—	—	—	face roller	—	—	—	—	250 40	10ea	—	61 3	—
cough sweets	18 0	4 6	1 0	—	glaser's blade	—	—	—	—	Posner's (975 PDS)	—	—	—	—
(3 doz)	(3 doz)	—	—	—	nylon hedgehog	—	—	—	—	Guiche	100 0	25 0	14 6	—
Hooper's (Dr. John)(815 MR&Co.)	—	—	—	—	resonance bow	—	—	—	—	Prednisolone (938 PD)TS	—	—	—	—
female pills	13 6	3 4½	2 0	—	spindle	—	—	—	—	tablets 5mgm 100	180 0	—	22 6	—
28 6	7 1½	4 0	—	—	suction bell	—	—	—	—	500 67	6ea	—	101 3	—
Hudnut (631 Hudnut)	—	—	—	—	vacuum bust cup	—	—	—	—	Prednisone (938 PD)TS	—	—	—	—
Cream of Cactus	—	—	—	—	Matthew's (1085 RB)	—	—	—	—	tablets 5mgm 100	180 0	—	22 6	—
511	78 0	19 6	11 6	—	Matthew's (409 EH)	—	—	—	—	500 67	6ea	—	101 3	—
Hudson's Eumenthol (619 HMO)	—	—	—	—	Max Factor (813 MF)	—	—	—	—	Prednisone (1263 Upjohn)TS	—	—	—	—
pastilles	17 2	4 4	2 6	—	for men	—	—	—	—	tablets 5mgm 100	15 0ea	—	—	—
Inecto (1028 Rapidol)	—	—	—	—	Clear-gel	40 0	9 6	5 9	—	500 67	6ea	—	—	—
Hair Magic	27 0	6 9	4 0	—	Meditax (1457 PP Ltd.)	—	—	—	—	Prenatal (746 Lederle)	—	—	—	—
Hi-lift bleach	27 0	6 9	4 0	—	pellets	22	—	—	—	Dri-Kaps	100 18	0ea	—	27 0
In Love (1376 Hartnell)	—	—	—	—	Minims (1154 S&N)†s1	—	—	—	—	1000 149	10ea	—	224 9	—
eau de toilette	—	—	—	—	hyosine hydrobrom. 0.2% 20	—	—	—	—	Procafin (452 FBA)	—	—	—	—
spray mist	HL11	101 0	25 3	14 9	Myclfradin (1263 Upjohn)TS	—	—	—	—	ampoules 5mils 5	—	—	—	—
HL13	—	—	—	—	tablets 0.5gm 20	37 6ea	—	—	—	Radiostoleum (179 BDH)	—	—	—	—
Jaslyn (1070 Windsor)	—	—	—	—	Myclvin (147 Boots)TS	—	—	—	—	capsules	500 100	0	12 0	—
soap coal tar 2003	11 0	2 8	1 6	—	syrup	170mils	33 6ea	—	50 3	1000	—	—	—	—
Jeyes (671 Jeyes)	—	—	—	—	Naclex (518 Glaxo)	—	—	—	—	Redi Splint (938 PD)	—	—	—	—
Freshbin dredger	—	—	—	—	tablets 25mgm	—	—	—	—	hand and wrist	35 6ea	—	—	—
Jeypine (671 Jeyes) medium	11b	13 6	1 6	—	Nair (235 Carteret)	—	—	—	—	half arm	45 11ea	—	—	—
15 3	—	—	—	—	cream sachet	14 1	3 6	1 11	—	full arm	53 7ea	—	—	—
K285 (147 Boots)	—	—	—	—	(1 doz)	(1 doz)	—	—	—	foot and ankle	53 7ea	—	—	—
glove powder	—	—	—	—	Natrodale (1513 Rodale)	—	—	—	—	half leg	71 0ea	—	—	—
1 kilo	11 6ea	—	17 3	—	Dolomite magnesium tablets	—	—	—	—	full leg	78 3ea	—	—	—
5 kilo	52 6ea	—	78 9	—	100 4 6ea	—	—	—	—	athletic (full leg)	95 0ea	—	—	—
12½ kilo	121 6ea	—	182 3	—	300 12 6ea	—	—	—	—	emergency kit	333 0ea	—	—	—
Kantrex (171 BLL)TS	—	—	—	—	500 18 0ea	—	—	—	—	Reedette (1169 GS&S)	—	—	—	—
injection 0.5gm	18 0ea	—	27 0	—	rose hip capsules 200mgm	—	—	—	—	toothbrush holder	37 0	3 8½	4 11	—
1.0gm	30 0ea	—	45 0	—	50 8 8ea	—	—	—	—	Resochin (452 FBA)	—	—	—	—
Kerbina (694 Kerbina)	—	—	—	—	200 31 8ea	—	—	—	—	tablets	1000	—	—	—
compound raspberry-leaf	—	—	—	—	350 50 0ea	—	—	—	—	Revivex (597 HCL) hair conditioner	—	—	—	—
tablets	50 20 0	5 0	2 11	—	Neo-Cytamen (518 Glaxo)	—	—	—	—	Rheomacrodex (1497 PGBl)TS	—	—	—	—
100 32 0	8 0	4 8	—	—	veterinary ampoules	—	—	—	—	(distributors 802 MS)	—	—	—	—
300 84 0	21 0	12 3	—	—	1000 vials	9 6ea	—	12 8	—	10% in dextrose	—	—	—	—
cramp tablets	50 20 0	5 0	2 11	—	Nescafe (883 Nestle) existing entry	—	—	—	—	500mils	40 0ea	—	—	—
menopause tablets	50 20 0	5 0	2 11	—	Nescafe (883 Nestle)	—	—	—	—	10% in normal saline	500mils	40 0ea	—	—
morning sickness tablets	50 20 0	5 0	2 11	—	sachets	72 75 5	—	—	—	Saf-T-Coil (1574 DBMP)	—	—	—	—
Kodak (711 Kodak)	—	—	—	—	tin	1oz 65 7	—	—	—	intra-uterine device	—	—	—	—
cameras	—	—	—	—	4oz 124 0	—	—	—	—	Salazopyrin (1497 PGBl)†s4B	—	—	—	—
Brownie 127	16 9½ea	4 2ea	30 0	—	8oz 108 6	—	—	—	—	(distributors 802 MS)	—	—	—	—
case	4 7ea	1 2ea	8 3	—	(1 doz)	—	—	—	—	tablets 0.5gm 100	30 8ea	—	46 0	—
outfit	41 11ea	9 4ea	72 8	—	2oz 34 6	—	—	—	—	500 114	8ea	—	172 0	—
La India (975 PDS)	—	—	—	—	4oz 65 10	—	—	—	—	En-tabs	100 36	10ea	—	55 3
deodorant stick	55 0	13 9	8 0	—	Nestle (451 F&J)	—	—	—	—	Sanamycin (452 FBA)	—	—	—	—
olive oil pomade	28 0	7 0	4 6	—	Nestle Lite	46 3	11 7	6 9	—	ampoules 200mcgm 25	—	—	—	—
57 0	14 3	8 11	—	—	Neutraphylline (292 C)	—	—	—	—	Schacht (1220 CT)	—	—	—	—
wonder pomade	30 6	7 7½	4 9	—	with phenobarb. tablets and suppositories	—	—	—	—	colostomy appliance	40 0ea	—	50 0	—
50 0	12 6	7 9	—	—	Nevroids (1467 AP&T)	—	—	—	—	spares	—	—	—	—
75 0	18 9	11 9	—	—	tablets	30 42	0	10 6	6 2	elastic belt	8 0ea	—	10 0	—
Landers (PDS)	—	—	—	—		70 68	0	17 0	9 11	foam sponge rings	1 7ea	—	2 0	—
cold cream	5oz 48 0	12 0	7 0	—	Ninona (210 B&C)	—	—	—	—	plastic flange rings	8 4½ea	—	10 0	—
dry skin cream	5oz 48 0	12 0	7 0	—	washing squares	16 6	—	2 1	—	plastic locking rings	8 4½ea	—	10 0	—
hand cream	5oz 48 0	12 0	7 0	—	Nixir (529 Gorney)	—	—	—	—	polythene bags (100)	12 0ea	—	15 0	—
6oz sizes	—	—	—	—	after shave milk	48 0	12 0	7 0	—	Silver-Tex (1203 Surex)	—	—	—	—
	—	—	—	—	Nopaine (1000 PPL)	—	—	—	—	protectives, teat	60 0	—	3 0	—
	—	—	—	—	first aid spray 4oz	34 0								

Soraya (100 BI)				Tetrex (171 BLL)T5				lamb dysentery antiserum conc. (vet.)			
six-eye wrinkle treatment				syrup				50mils 29 3ea			
—				2oz 6 0ea				—			
—				16oz 43 8ea				—			
twelve eye wrinkle treatment				—				9 0			
—				—				65 0			
—				—				—			
refill pads (3)				—				—			
—				—				—			
Southalls (1164 55L)				Thawpit (1221 Thawpit)				Wernets Dr. (1178 Stafford)			
sanitary towels				naphthalene moth balls				denture powder			
luxury soft size 1				11 3				49gm 28 0			
size 2				—				100mils 30 0ea			
—				—				—			
original				—				—			
Spa (1167 Spa)				Thermos (1226 Thermos)				White's, Dr. (761 Lilia White)			
bath set				flasks wide mouth				sanitary belt			
351/2 61 4				60 —				14 9			
clothes brush kangaroo				62 —				1 6			
34 3				64 —				1 9			
—				—				—			
hairbrush gent's				American wide mouth				Wright's (1351 WLU)			
453 112 0				—				liquor carbonis detergens 40oz			
28 0				—				—			
15 11				—				—			
Sparine (1352 Wyeth)†s4B				Throsil (292 C)†				AMENDMENTS TO KEY			
tablets 100mgm 50 15 2ea				Toni (242 Toni)†				TO SUPPLIERS			
250 70 2ea				Trimetts (1262 UL)				76 Atkinson=J. & E. Atkinson, Ltd., 17 Bessemer Road,			
—				Trimetts (1552 UL)				Welwyn Garden City, Herts. Welwyn Garden 28100.			
—				Trisulphonamide (147 Boots)†s4B				100 BI=Beautishape International, Ltd., 31a James			
Spray Net (597 HCL)				tablets				Street, London, W.1. Welbeck 3711.			
hair spray				500 33 4ea				241 Cavendish=Cavendish Chemical Co. (New York)			
16oz 59 0				—				Ltd., Orleston Mews, Liverpool Road, London, N.7			
8oz				—				North 3658.			
—				—				521 Glenwood=Glenwood Laboratories, Ltd., 7 Ber-			
Sprenger (100 BI)				Trufood (1249 Trufood)				keley Street, London, W.1. Hyde Park 2971.			
facial vapour bath				baby cereal				536 GMP=Grahams Medical Products, Ltd., Park			
—				8oz 14 5				Road, Faringdon, Berks. Faringdon 2011.			
spare aromatic bottle				115gm 24 0				565 Hanimex=Hanimex (U.K.), Ltd., 15 Great Dover			
—				—				Street, London, S.E.1. Hop 8161.			
spare plastic mask				nursery Hysan				615 H&M=Hodges & Moss, Ltd., Harlescott Lane,			
—				—				Shrewsbury, Shrewsbury 51558.			
—				—				771 LCP=Lofthouse Chemical Products, Ltd.,			
Steroxin (501 Geigy) existing entry				Tuamine sulphate (413 Lilly)				103 Lord Street, Fleetwood, Lancs. Fleetwood 3688.			
Steroxin (501 Geigy)				solution 1%				792 M&GG=M. & G. G. Electrical Co., 1 Priory Hill,			
ointment 30gm 27 0				plastic spray bottle				Sudbury, Middlesex.			
120gm 78 0				15mils 2 2ea				799 MP=Marshall's Pharmaceuticals, Ltd., 17 Hen-			
—				—				rietta Street, London, W.C.2. Temple Bar 2147.			
hydrocortisone cream T5				—				823 M&R=McKeesson & Robbins, Ltd., Haine Industrial			
15gm 90 0				—				Estate, Ramsgate, Kent. Thanet 52911.			
22 6				—				939 Parkinsons=Parkinsons, Ltd., Curzon Street,			
13 1½				—				Burnley, Lancs. Burnley 21818.			
Suave (597 HCL)				Uricure (1467 AP&T)				1156 FS=Frank Sammeroff, Ltd., 120 Gorbals Street,			
16oz 44 9				tablets				Glasgow, C.S. South 1951.			
10 11				30 23 6				1203 Surex=Surex, Ltd., 4 Leicester Road, Blackpool,			
6 3				70 33 0				Lancs. Blackpool 20434.			
—				120 52 0				1220 CT=Chas. F. Thackray, Ltd., 38 Welbeck Street,			
Suba-Seal (479 WF)				—				London, W.1. Welbeck 8152.			
teat heat moulded				—				1282 VB=Vines Bioclin, Ltd., 111 Clarence Road,			
—				—				London, E.5. Amhurst 8808.			
IC17 6 0				—				1436 D & Co=Degenhardt & Co., Ltd., 20 Mortimer			
—				—				Street, London, W.1. Museum 8050.			
IC40 6 0				—				1467 AP&T=Acton Pill & Tablet Co., Ltd., Orleston			
—				—				Mews, Liverpool Road, London, N.7. North 3658.			
Sulphatriad (971 P5MB)†s4B				Varidase (746 Lederle)TS				1492 Baum=M. Baum Wholesale Chemists, Ltd.,			
tablets 0.5gm 100 84 0				topical 125,000 units				Monkwearmouth, Sunderland. Sunderland 71081.			
—				24 0ea				1552 UL=Unicliffe, Ltd., Unimart House, Stonar,			
500 33 4ea				intramuscular 25,000 units				nr. Sandwich, Kent.			
—				9 8ea				1554 BL=Babytown, Ltd., Hoddlesden Mills, Darwen,			
Sunbeam (1199 Sunbeam)				buccal tablets 12 19 2ea				Lancs. Darwen 71602.			
electric razor				oral tablets 12 19 2ea				1574 DBMP=Down Bros. and Mayer & Phelps, Ltd.,			
—				—				Church Path, Mitcham, Surrey. Mitcham 6291.			
cordless 711				—				—			
—				—				—			
electric razor X500				—				—			
—				—				—			
Sungold (50 APL)				Vaseline (256 CPL)				—			
liquid				shampoo beauty bottle				—			
17 0				40gm 14 0½				3 6			
—				70gm 18 5				4 7			
powder				123gm 27 6				6 10½			
12 0				40gm 14 0½				3 6			
—				70gm 18 5				4 7			
Sunsilk (509 Gibbs)				123gm 27 6				6 10½			
shampoo's cream, lemon,				—				—			
beauty & tonic,				—				—			
bottles 20 5				—				—			
5 1½				—				—			
2 9				—				—			
Taxol-Methionine (292 C) tablets				Veinotrope (292 C) tablets				—			
T. B. P. (1262 UL)				Vi-Magna (746 Lederle)				—			
—				syrup				—			
T. B. P. (1552 UL)				4oz 4 0ea				6 0			
—				16oz 12 0ea				18 0			
Tche Hao (100 BI)				Vytina (107 BH&L)				—			
heated ball massager				Wata (980 Photopia)				—			
—				cubeflash				39 6			
—				—				—			
T.C.P. (1262 UL)				Wellcome (208 BW)				—			
T.C.P. (1552 UL)				black disease antiserum (vet.)				—			
Teevex (501 Geigy) existing entry				50mils 31 6ea				42 0			
Teevex (501 Geigy)				blackleg antiserum (vet.)				—			
ointment 15gm 30 0				100mils 31 6ea				42 0			
—				—				—			
120gm 10 3ea				—				—			
—				—				—			

AMENDMENTS TO KEY TO SUPPLIERS

76 Atkinson=J. & E. Atkinson, Ltd., 17 Bessemer Road, Welwyn Garden City, Herts. Welwyn Garden 28100.

100 BI=Beautishape International, Ltd., 31a James Street, London, W.1. Welbeck 3711.

241 Cavendish=Cavendish Chemical Co. (New York) Ltd., Orleston Mews, Liverpool Road, London, N.7 North 3658.

521 Glenwood=Glenwood Laboratories, Ltd., 7 Berkeley Street, London, W.1. Hyde Park 2971.

536 GMP=Grahams Medical Products, Ltd., Park Road, Faringdon, Berks. Faringdon 2011.

565 Hanimex=Hanimex (U.K.), Ltd., 15 Great Dover Street, London, S.E.1. Hop 8161.

615 H&M=Hodges & Moss, Ltd., Harlescott Lane, Shrewsbury, Shrewsbury 51558.

771 LCPL=Lofthouse Chemical Products, Ltd., 103 Lord Street, Fleetwood, Lancs. Fleetwood 3688.

792 M&GG=M. & G. G. Electrical Co., 1 Priory Hill, Sudbury, Middlesex.

799 MP=Marshall's Pharmaceuticals, Ltd., 17 Henrietta Street, London, W.C.2. Temple Bar 2147.

823 M&R=McKeeson & Robbins, Ltd., Haine Industrial Estate, Ramsgate, Kent. Thanet 52911.

939 Parkinsons=Parkinsons, Ltd., Curzon Street, Burnley, Lancs. Burnley 21818.

1156 FS=Frank Sammerhoff, Ltd., 120 Gorbals Street, Glasgow, C.5. South 1951.

1203 Surex=Surex, Ltd., 4 Leicester Road, Blackpool, Lancs. Blackpool 20434.

1220 CT=Chas. F. Thackray, Ltd., 38 Welbeck Street, London, W.1. Welbeck 8152.

1282 VB=Vines Biocirin, Ltd., 111 Clarence Road, London, E.5. Amhurst 8808.

1436 D & Co=Degenhardt & Co., Ltd., 20 Mortimer Street, London, W.1. Museum 8050.

1467 AP&T=Acton Pill & Tablet Co., Ltd., Orleston Mews, Liverpool Road, London, N.7. North 3658.

1492 Baum=M. Baum Wholesale Chemists, Ltd., Monkwearmouth, Sunderland. Sunderland 71081.

1552 UL=Unicliffe, Ltd., Unimart House, Stonar, nr. Sandwich, Kent.

1554 BL=Babytown, Ltd., Hoddlesden Mills, Darwen, Lancs. Darwen 71602.

1574 DBMP=Down Bros. and Mayer & Phelps, Ltd., Church Path, Mitcham, Surrey. Mitcham 6291.

AMENDMENTS AND ADDITIONS TO KEY TO SUPPLIERS

1104 Satinex=Satinex (Great Britain), Ltd., Shaw M
Hawarden, N. Wales. Hawarden 3021.

Printed by HAYCOCK PRINTERS, LTD., 2 Exmoor Street, London, W.10,
and published by the Proprietors, MORGAN BROTHERS (PUBLISHERS), LIMITED, at 28 Essex Street, London, W.C.2



